Getting Lean and Mean in the Oil Business
Why Unemployment Will Hang High
Fortune's 2nd 500 Largest Industrial Corporations

$3.00 June 14, 1982

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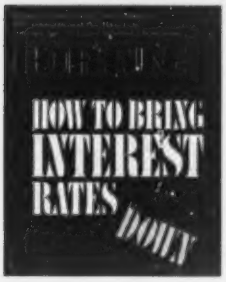

The messages conveyed by FORTUNE covers are rarely stated as baldly as in this typographical design by art director Ronald N. Campbell. The subject, however, is the overriding economic issue of the times. The story begins on page 66.

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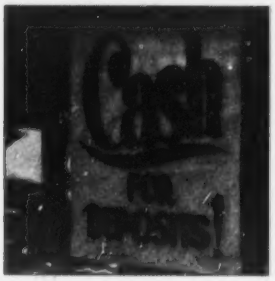

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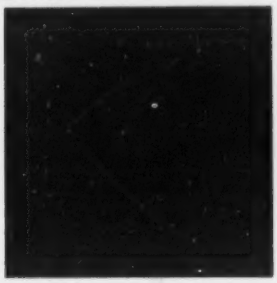

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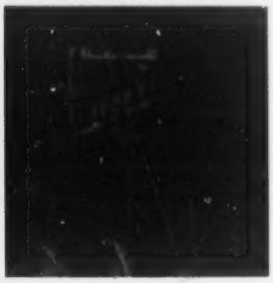

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THE FORTUNE DIRECTORY OF THE LARGEST U.S. INDUSTRIAL CORPORATIONS

The 2nd 500

The past year produced several negative records for the FORTUNE Second 500. For the first time in the 13-year history of the list, which encompasses the U.S. industrial companies ranking in size from 501 through 1,000, the sales cutoff point fell—from $124.7 million in 1980 to $122.5 million for 1981. The total sales of the group rose, as they have every year, but the rise, 0.8%, was the smallest ever and translates, after adjusting for inflation, into a real decline of 9.6%. The total of the Second 500's employees, 1.6 million, is also the lowest ever—a 20% drop from the 1974 peak.

In part the numbers reflect structural changes in the two FORTUNE 500 lists. Seventy-five companies on last year's Second 500 have left the list. Of those, 29 moved up to fill vacancies in the First 500; a score of those vacancies were created by a record number of acquisitions and mergers. Eleven companies on the Second 500 were acquired by companies not on the list, two (Copeland and Russell Stover Candies) went private, and one (OKC) was liquidated. In addition, companies engaged in broadcasting and motion-picture production were removed from both industrial lists this year—six from the First 500, eight from the Second—because they have been reclassified as diversified-service corporations. Some are apt to appear on the list of such firms FORTUNE will publish for the first time in the July 12 issue.

The recession also took a toll; 13 companies fell off the list because their sales declined. Further signs of distress: total profits were down 4.4% (14.8% if adjusted for inflation), and 51 companies lost money, the poorest showing since 1975. The median total return to investors, 1.4%, was the worst since 1974; that includes both dividend yield and stock-price appreciation.

The places vacated by the 75 departing companies were filled by 25 that returned to the Second 500 after absences of varying lengths and by 50 newcomers. Of those returning, four dropped down from the First 500, including International Flavors & Fragrances, which heads the Second 500 this year—as it did in 1979.

Several companies returned after being absent for many years. Kearney-National, No. 959 in 1969, reentered the list as No. 814 with the largest percentage increase in sales recorded by any Second 500 company. A manufacturer of electrical power distribution products, Kearney-National tripled its sales to $186.5 million when it acquired Wabash, a maker of computer-memory products and electrical and electronic components. Keuffel & Esser, No. 987 in 1970, and General Steel Industries, No. 639 in 1972, also returned. But these are farewell appearances: both were acquired after their 1981 fiscal years.

The fruits of Apple's growth

Hard-charging newcomers accounted for seven of the ten companies recording the greatest percentage increases in sales. Apple Computer, perhaps the best known, followed Kearney-National with the second-largest increase—but did it entirely through internal growth. Apple increased its revenues by 185.8% to $334.8 million in its first year as a public company, enabling it to leapfrog 80% of the list and become No. 598. Still, that was a modest increase by Apple standards; its sales have grown at a compound annual rate of 356% over the last four years.

The fates of two companies show that higher sales are not necessarily good news. Newcomer Tomlinson Oil (No. 970) got on the list because its sales rose 119%. But its 1980 profit of $3 million turned into a 1981 loss of $5.4 million as a result. A petroleum refiner, Tomlinson completed a major capacity expansion just as deregulation allowed domestic crude prices to rise and the recession produced a soft market for refined products.

Sealaska (No. 745) had its own sort of growth-related misfortune. A transportation and building-products company owned and operated by Alaskan Indians, it managed 1980's largest percentage increase in sales—684%—with the purchase of a seafood processor. All was well until February 1982, when the Food and Drug Administration advised that salmon canned by the new subsidiary might be contaminated with botulin. Sealaska has now recalled nearly ten million cans. It plans to charge the expense against 1981 earnings—all the cans were produced last year or earlier—and so does not yet have a final net income figure.

The most unenviable record was set by No. 984, Combustion Equipment Associates, a manufacturer of pollution-control equipment that has been in Chapter 11 since 1980. Combustion Equipment's $129.9-million loss is the largest in the Second 500's history. More monumentally, the loss is the first by any company on any FORTUNE list that exceeds its sales—which amounted to $129.6 million. The bulk of the loss came from a $93.9-million write-off of ventures that converted wastes into fuel and built utility scrubbers.

Several companies recorded spectacular but illusory percentage increases in profits. Kuhlman, a manufacturer of electric transformers, dropped from the list in 1980 and returned as No. 950 in 1981, posting the largest gain—9,767.6%. However, that reflected a $3.6-million increase over its 1980 profit of $37,000. Five other companies

boasting profit increases of over 1,000% earned less than $1 million in 1980.

The median total return to investors—that wretched 1.4%—masks large differences among industries. As in the First 500, apparel companies performed best, providing a one-year return of 36.3%. The worst—believers in efficient capital markets will not be surprised—was the industry recording the largest decrease in profits, the lowest return on stockholders' equity, and the lowest return on sales. A person holding a stock portfolio of Second 500 petroleum refiners throughout fiscal 1981 would have seen his investment diminish by 37.5%. The second-worst one-year investment performance—minus 28.9%—was recorded by the aerospace industry. Aerospace did post the best ten-year record, a compound annual return of 22.5%, but that seeming triumph mainly reflects the industry's depressed stock prices at the end of 1971.

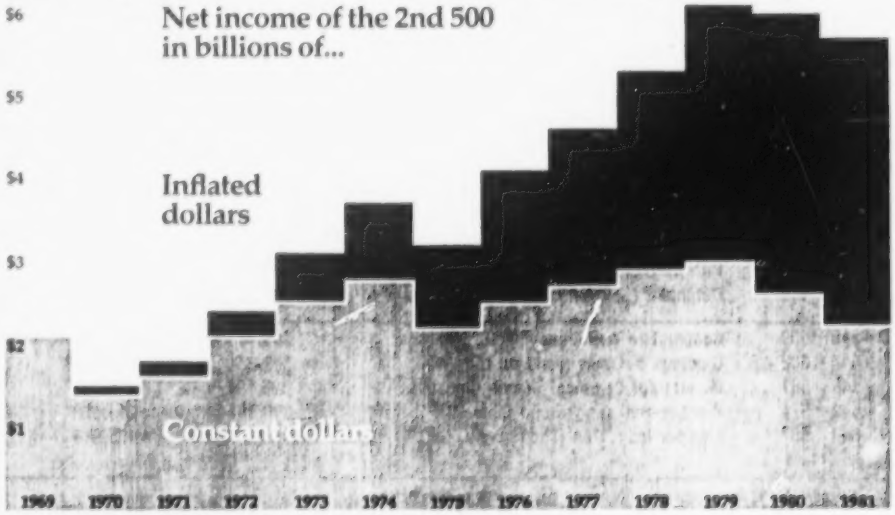
Bye-bye, Illini

Two veteran Second 500 companies are making what are likely to be their last appearances. Each dropped a substantial portion of its business in 1981, but because FORTUNE includes discontinued operations in its calculation of net sales, each was able to remain on the list this year. Illini Beef Packers (No. 855) sold its slaughtering and packing operations, leaving the company only with processing operations, which accounted for $22.8 million in sales in 1981, and with a new name, Imark Industries. Another food company, Acton (No. 577), spun off its food business, which accounted for sales of $338.3 million in 1981, into a newly organized company, Beltran. Its remaining businesses, manufacturing telephone-interconnect equipment and operating cable-television systems, produced sales of only $18.7 million in 1981. Although Imark Industries and Acton will probably not appear on a FORTUNE list for some time to come, Beltran can be expected to make its debut next year—a year that with any luck at all will be more hospitable to the Second 500 than was 1981.

—ELIZABETH S. SILVERMAN

Performance of the 2nd 500	1981	1980
Sales (billions)	$120.9	$120.0
Change in sales	.8%	9.2%
Profits (billions)	$5.7	$6.0
Change in profits	-4.3%	-2.4%
Assets (billions)	$90.7	$86.9
Number of sales increases	404	414
Number of profit increases	319	282
Number of money losers	51	42
Median return on sales	4.3%	4.5%
Median return on equity	13.6%	14.2%
Median total return for the year	1.40%	21.57%
Number of employees (millions)	1.6	1.7

An Unprecedented Two-Year Earnings Slump



THE SECOND 500 LARGEST INDUSTRIAL CORPORATIONS (ranked by sales)§

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
501	498	**International Flavors & Fragrances** (New York)	451,088	430,890	18	66,123	4	329,878	5
502	511	**A.H. Robins** (Richmond, Va.)	450,854	443,942	17	44,228	10	310,201	7
503	529	**Seaboard Allied Milling** (Chestnut Hill, Mass.)[1]	450,445	140,640	280	6,512	311	58,956	310
504	537	**Ametek** (New York)	448,086	265,343	77	26,488	65	143,437	76
505	577	**MEI** (Minneapolis)	445,781	250,696	88	26,911	59	109,222	139
506	530	**Harvey Hubbell** (Orange, Conn.)	445,758	283,121	64	34,609	28	178,100	37
507	504	**North American Coal** (Cleveland)	445,166	892,816	2	618	433	80,396	218
508	542	**Amdahl** (Sunnyvale, Calif.)	442,774	457,078	16	26,764	62	266,165	10
509	533	**Snap-on Tools** (Kenosha, Wis.)	441,514	339,150	34	40,013	18	213,057	17
510	506	**Royal Crown Companies** (Atlanta)	441,508	228,407	114	15,530	146	108,904	140
511	564	**Pittsburgh-Des Moines** (Pittsburgh)	441,105	164,555	220	6,408	314	71,241	256
512	544	**Stanadyne** (Windsor, Conn.)	439,344	231,716	111	25,273	70	141,695	80
513	553	**Transamerica Delaval** (Lawrenceville, N.J.)[2]	436,800	322,500	45	34,200	30	174,200	42
514	550	**Universal Foods** (Milwaukee)[3]	435,776	208,193	145	13,663	170	93,743	172
515	515	**Roper** (Kankakee, Ill.)[4]	433,712	196,377	164	6,473	312	77,671	228
516	528	**Butler Manufacturing** (Kansas City, Mo.)	433,035	273,857	73	16,093	138	162,708	53
517	492	**Questor** (Toledo)	431,086[#]	219,339	130	(20,365)	488	111,563	134
518	653	**Worthington Industries** (Columbus, Ohio)[1]	428,144	254,164	84	22,891	85	101,022	164
519	526	**Liquid Air** (San Francisco)[5]	427,991	484,307	15	31,526	40	234,955	13
520	485	**Fleetwood Enterprises** (Riverside, Calif.)[6]	427,621	169,465	208	2,440	396	107,022	146
521	•	**Standard Commercial Tobacco** (Wilson, N.C.)[7]	427,586	182,901	185	9,195	237	47,244	377
522	525	**Dairylea Cooperative** (Pearl River, N.Y.)[7]	425,239	88,814	421	N.A.[9]		11,584	491
523	497	**McDonough** (Parkersburg, W. Va.)[10,11]	424,395	211,538	141	15,639	143	157,578	59
524	521	**American Maize-Products** (Stamford, Conn.)	423,153	219,420	129	12,208	191	108,811	142
525	519	**Phillips-Van Heusen** (New York)[10]	419,357	201,333	155	5,356	339	93,721	173
526	551	**Keystone Foods Corp.** (Bryn Mawr, Pa.)[12]	418,683	92,821	400	4,132	364	22,848	471
527	505	**Jonathan Logan** (Secaucus, N.J.)	417,738	223,828	119	(11,989)	483	118,606	115
528	524	**Holly** (Dallas)[4•]	417,138	158,499	231	5,672	331	56,421	321
529	686	**Quanex** (Houston)[13]	416,762	277,391	70	31,444	42	129,632	92
530	634	**Echlin Manufacturing** (Branford, Conn.)[14]	415,747	342,524	33	12,737	186	199,867	22
531	569	**Easco** (Baltimore)	414,567	194,095	169	12,971	182	79,050	223
532	554	**Stone Container** (Chicago)	411,051	333,311	36	23,964	78	133,459	85
533	487	**General Refractories** (Bala Cynwyd, Pa.)	409,803	303,430	54	(18,951)	487	83,710	206
534	570	**Cross & Trecker** (Bloomfield Hills, Mich.)[7]	408,916	335,411	35	41,169	17	187,919	29
535	580	**Maytag** (Newton, Iowa)	408,637	229,460	113	37,436	21	189,919	27
536	586	**Wisconsin Dairies Cooperative** (Baraboo, Wis.)[7]	408,014	77,747	451	N.A.[9]		33,949	431
537	548	**Carlisle** (Cincinnati)	406,313	225,344	117	35,317	27	132,433	90
538	556	**Lukens Steel** (Coatesville, Pa.)	405,718	261,121	79	10,634	213	143,234	77
539	582	**Meredith** (Des Moines, Iowa)[15]	403,425	316,177	48	23,595	82	150,845	67
540	540	**Keystone Consolidated Industries** (Peoria, Ill.)[16]	401,340	236,474	105	(2,550)	457	107,549	144
541	531	**Acme-Cleveland** (Cleveland)[3]	400,744	252,017	85	10,931	210	121,668	107
542	562	**Southland Royalty** (Fort Worth, Tex.)	400,139	687,820	5	28,791‡	52	106,043	150
543	•	**Siemens-Allis** (Atlanta)	399,600	241,300	97	14,200	155	119,700	114
544	625	**Pittway** (Northbrook, Ill.)	399,227	282,169	65	34,318	29	183,410	32
545	615	**Datapoint** (San Antonio)[4]	396,220	490,118	14	48,761	8	318,423	6
546	609	**Cooper Tire & Rubber** (Findlay, Ohio)	393,945	185,523	180	17,266	131	81,806	213
547	602	**Giddings & Lewis** (Fond du Lac, Wis.)	393,234	229,478	112	35,465	26	171,448	43
548	587	**Mississippi Chemical** (Yazoo City, Miss.)[16]	392,154	422,641	19	N.A.[9]		159,035	56
549	574	**Prentice-Hall** (Englewood Cliffs, N.J.)	390,567	319,628	46	33,796	32	176,241	41
550	567	**Flowers Industries** (Thomasville, Ga.)[16]	390,015	175,948	197	14,068	159	76,972	231

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 200.

§Company sales are ranked 501 to 1,000; all other categories are ranked 1 to 500.

N.A. Not available.

•Indicates that a corporation was not among the 500 or the Second 500 in 1980.

†Average for the year; see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on p

#Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[1]Figures are for fiscal year ending May 31, 1981.

[2]Wholly owned by Transamerica.

[3]Figures are for fiscal year ending September 30, 1981.

[4]Figures are for fiscal year ending July 31, 1981.

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF SALES %	SALES RANK	NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY %	STOCKHOLDERS' EQUITY RANK	EARNINGS PER SHARE '81($)	'80($)	'71($)	EARNINGS PER SHARE GROWTH RATE 1971-81 %	GROWTH RATE 1971-81 RANK	TOTAL RETURN TO INVESTORS 1981 %	1981 RANK	TOTAL RETURN TO INVESTORS 1971-81 AVERAGE %	1971-81 AVERAGE RANK	INDUSTRY CODE
3,582	177	14.7	16	20.0	86	1.61	1.73	0.45	14.93	144	(10.16)	278	(0.51)	314	43
5,500	60	9.8	64	14.3	231	1.77	1.01	0.75	8.97	224	(0.48)	233	(3.33)	338	42
755	475	1.4	378	11.0	305	4.38	3.91	1.60	10.59	211	24.41	118	14.68	115	20
7,000	18	5.9	171	18.5	123	2.44	2.02	0.46	18.16	103	10.12	181	19.27	60	38
4,100	130	6.0	167	24.6	36	3.19	2.34	(1.53)‡	—		65.93	27	22.53	42	49
6,947	20	7.8	113	19.4	105	2.82	2.43	0.89	12.22	185	14.46	161	8.46	199	36
5,130	73	0.1	437	0.8	435	0.18	3.07	0.38	(7.20)	320	(22.35)	336	13.25	134	10
5,058	77	6.0	166	10.1	322	1.31	0.83	N.A.	—		(11.41)	283	—		44
6,100	39	9.1	76	18.8	116	1.98	1.92	0.46	15.72	133	10.52	178	6.38	225	34
4,800	90	3.5	291	14.3	230	1.89	1.24	1.22	4.47	279	4.51	216	(3.73)	341	49
3,956	142	1.5	377	9.0	339	2.50	3.05	0.42	19.53	84	(38.95)	412	22.55	40	34
6,224†	36	5.8	176	17.8	142	5.27	2.80	1.26	15.38	138	36.71	77	15.11	109	45
5,490	61	7.8	111	19.6	97	N.A.	N.A.	N.A.	—		—		—		45
3,617	171	3.1	306	14.6	225	1.95	1.52	0.83	8.92	226	39.02	69	9.19	189	20
5,800	46	1.5	375	8.3	351	1.76	1.36	1.17	4.29	280	23.86	120	4.76	247	45
4,262	123	3.7	276	9.9	327	2.92	3.30	0.74	14.71	145	(1.58)	240	12.09	150	34
4,300	116	—		—		(2.10)	(1.32)	0.99	—		4.36	220	(2.12)	327	40
4,500	104	5.3	194	22.7	53	1.85	1.60	0.10	33.88	11	13.67	171	—		33
4,000	138	7.4	124	13.4	252	2.86	2.76	N.A.	—		(35.23)	395	—		28
6,300	31	0.6	422	2.3	424	0.22	(0.75)	1.32	(16.40)	330	53.08	40	(6.96)	363	37
6,770†	25	2.2	357	19.5	104	5.45	3.59[a]	0.44‡	28.62	27	46.30	53	—		21
1,200	453	—		—		N.A.	N.A.	N.A.	—		—		—		20
7,300†	12	3.7	279	9.9	326	N.A.	5.39	1.34	—		—[•]		—		31
3,045	219	2.9	319	11.2	303	2.35	2.07	0.93	9.71	218	(33.21)	387	3.65	258	20
9,000	3	1.3	391	5.7	389	1.79	2.48	1.01	5.89	265	50.37	45	1.00	293	23
1,901	382	1.0	407	18.1	134	1.48	1.45	N.A.	—		43.83	59	—		20
5,400	64	—		—		(2.32)	1.28	3.32	—		27.35	108	(10.71)	371	23
355	493	1.4	383	10.1	323	0.67	1.10	0.02	42.07	6	(29.51)	372	24.01	29	29
2,474†	300	7.5	118	24.3	38	3.05	1.89	0.31	25.69	40	20.67	130	27.26	20	33
7,100	17	3.1	309	6.4	379	0.70	0.55	0.42	5.24	273	(3.50)	245	17.36	72	40
5,075	76	3.1	307	16.4	167	3.85	0.97	0.85	16.31	122	50.44	44	11.42	156	34
3,550	179	5.8	174	18.0	138	2.48	2.22	0.16	31.53	20	13.83	168	21.07	50	26
5,991	43	—		—		(5.01)	0.56	(0.46)‡	—		(51.33)	446	(4.86)	351	32
4,600	100	10.1	60	21.9	62	3.32	2.70	0.19[15]	33.12	15	(16.69)	309	26.75	21	45
4,217†	124	9.2	74	19.7	96	2.65	2.67	0.90	11.40	197	14.03	167	1.96	278	36
614	481	—		—		N.A.	N.A.	N.A.	—		—		—		20
4,828	88	8.7	87	26.7	23	3.76	2.78	0.37	26.10	36	(29.64)	373	24.37	27	30
3,762†	163	2.6	338	7.4	367	2.03	0.90	0.58‡	13.35	169	6.90	199	10.49	167	33
4,136	129	5.8	173	15.6	197	7.50	6.87	1.13	20.84	73	17.98	138	15.51	102	27
5,711	51	—		—		(1.36)	(1.84)	(0.40)‡	—		93.03	16	4.14	253	33
5,700	52	2.7	327	9.0	340	2.41	4.02	(0.15)	—		(11.66)	284	10.51	166	45
530	487	7.2	128	27.2	20	0.63‡	1.34	0.11	19.07	89	(24.62)	348	38.34	4	10
N.A.		3.6	269	11.9	286	N.A.	N.A.	N.A.	—		—		—		36
5,700	55	8.6	91	18.7	117	7.25	5.01	1.10	20.75	74	41.63	65	12.97	139	36
6,824	23	12.3	34	15.3	208	2.45	1.91	(0.78)	—		(14.05)	296	—		44
3,869	153	4.4	240	21.1	71	4.12	3.36	0.55	22.31	61	9.05	190	12.77	140	30
4,474	107	9.0	79	20.7	75	3.38	3.26	(0.62)	—		(7.08)	262	17.48	71	45
1,659	416	—		—		N.A.	N.A.	N.A.	—		—		—		28
5,800	47	8.7	89	19.2	110	3.41	3.11	1.60	7.86	239	32.91	94	(1.22)	320	27
7,500†	10	3.6	285	18.3	129	2.27	1.70	0.50	16.33	121	41.44	66	11.57	155	20

[a]Owned by L Air Liquide 64%

[•]Figures are for fiscal year ending April 30, 1981

†Figures are for fiscal year ending March 31, 1981

‡FORTUNE estimate

§Cooperatives provide only "net margin" figures which are not comparable with the net-income figures in these listings

††Figures are for fiscal year ending January 31, 1981

[11]Wholly owned by Henson Trust

[12]Figures are for fiscal year ending February 28, 1981

[13]Figures are for fiscal year ending October 31, 1981

[14]Figures are for fiscal year ending August 31, 1981

[15]Figure is for Cross

[16]Figures are for fiscal year ending June 30, 1981

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDER EQUITY ($000)	STOCKHOLDER EQUITY RANK
551	568	**Longview Fibre** (Longview, Wash.)[13]	389,450	353,329	26	11,261	203	169,690	46
552	585	**Diebold** (Canton, Ohio)	385,891	236,637	104	29,036	49	159,957	55
553	610	**American Crystal Sugar** (Moorhead, Minn.)[14]	384,404	258,194	80	N.A.*		104,301	156
554	519	**Milton Bradley** (Springfield, Mass.)	381,402	294,159	57	20,021	109	189,669	28
555	606	**Kennametal** (Latrobe, Pa.)[15]	379,856	328,780	38	33,585	33	213,621	16
556	539	**Talley Industries** (Mesa, Ariz.)[7]	376,765	218,070	133	(4,304)	466	86,998	193
557	563	**Albany International** (Menands, N.Y.)	376,036	322,635	44	27,920	56	198,026	23
558	643	**Tracor** (Austin, Tex.)	371,096	223,460	121	16,981	119	115,863	123
559	584	**Standex International** (Salem, N.H.)[16]	369,874	242,847	94	15,208	149	127,854	95
560	604	**Hillenbrand Industries** (Batesville, Ind.)[17]	367,755	286,361	62	28,690	54	168,781	49
561	599	**Media General** (Richmond, Va.)	366,544	323,923	43	31,554	39	190,679	26
562	560	**Mesa Petroleum** (Amarillo, Tex.)	366,464	2,069,355	1	115,049	1	595,445	1
563	676	**Prime Computer** (Natick, Mass.)	364,787	308,796	53	37,678	20	142,458	78
564	555	**Cleveland-Cliffs Iron** (Cleveland)	364,745	635,952	7	45,166	9	370,853	4
565	659	**Sanders Associates** (Nashua, N.H.)[4]	364,483	277,106	71	21,873	95	150,938	66
566	•	**Lufkin Industries** (Lufkin, Tex.)	364,443	247,478	91	62,697	5	191,277	25
567	590	**Zurn Industries** (Erie, Pa.)[7]	364,081	249,985	90	18,347	124	111,278	135
568	598	**Dr Pepper** (Dallas)	363,966	165,633	217	29,398	48	123,682	104
569	583	**Allen Group** (Melville, N.Y.)	362,873	201,255	156	8,679	251	88,645	190
570	620	**Rorer Group** (Fort Washington, Pa.)	362,270	312,335	52	35,581	25	177,868	38
571	595	**Alton Packaging** (Alton, Ill.)	362,165	192,344	171	9,475‡	233	95,347	169
572	614	**Tyco Laboratories** (Exeter, N.H.)[1]	360,873	274,966	72	22,519	89	126,313	101
573	557	**Alaska Interstate** (Houston)	360,842	673,058	6	41,567	16	260,473	11
574	630	**Oneida** (Oneida, N.Y.)[10]	359,591	215,310	138	22,518	90	89,570	188
575	637	**Guardian Industries** (Northville, Mich.)	359,376	386,338	23	31,395	43	157,611	58
576	636	**Coleman** (Wichita)	359,111	264,071	78	20,198	107	132,649	89
577	835	**Acton** (Acton, Mass.)	358,134¶	80,370	442	131	441	40,767	401
578	711	**First Mississippi** (Jackson, Miss.)[18]	357,697	318,926	47	29,704	47	138,384	83
579	571	**Itek** (Lexington, Mass.)	357,633¶	214,205	140	3,905	369	81,113	216
580	594	**Rubbermaid** (Wooster, Ohio)	357,138	237,854	102	25,577	68	155,029	63
581	612	**NCH** (Irving, Tex.)[6]	356,113	228,366	115	26,806	60	160,381	54
582	600	**Bandag** (Muscatine, Iowa)	354,022	240,248	99	31,475	41	179,497	34
583	675	**Stewart & Stevenson Services** (Houston)[19]	353,870	223,742	120	8,158	267	75,663	239
584	591	**DeSoto** (Des Plaines, Ill.)	353,400	179,869	189	18,840**	122	114,900	126
585	613	**Reeves Brothers** (New York)[15]	353,202	204,783	152	18,936	121	133,241	87
586	622	**Associated Coca-Cola Bottling** (Daytona Beach, Fla.)	352,608	161,962	224	26,802	61	119,946	113
587	581	**Robertshaw Controls** (Richmond, Va.)	351,565	220,345	127	7,901	276	110,174	137
588	616	**UNR Industries** (Chicago)	348,506	232,626	109	5,997	323	67,153	273
589	633	**Harte-Hanks Communications** (San Antonio)	344,810	397,821	22	25,362	69	166,709	51
590	618	**Grolier** (Danbury, Conn.)	344,786	288,049	61	14,285	154	(6,392)	497
591	578	**Amalgamated Sugar** (Ogden, Utah)	343,689	279,701	67	33,139	35	121,360	109
592	644	**Jostens** (Minneapolis)[16]	343,300	199,003	161	23,733	81	115,278	125
593	588	**Graniteville** (Graniteville, S.C.)	343,165	194,158	168	870	428	101,218	162
594	667	**Raybestos-Manhattan** (Trumbull, Conn.)	342,523	242,750	96	2,986	385	101,152	163
595	565	**UMC Industries** (Stamford, Conn.)	341,924	238,462	100	9,127	239	105,426	154
596	573	**Pettibone** (Chicago)[7]	340,924	329,812	37	718	432	107,034	145
597	593	**Olympia Brewing** (Tumwater, Wash.)	337,753¶	148,930	253	(1,394)	449	71,963	254
598	•	**Apple Computer** (Cupertino, Calif.)[3]	334,783	254,838	82	39,420	19	177,387	40
599	678	**Oxford Industries** (Atlanta)[1]	333,747	147,941	254	8,771	248	74,057	246
600	645	**Murray Ohio Manufacturing** (Brentwood, Tenn.)	332,278	173,521	203	9,091	240	78,714	224

N.A. Not available

•Indicates that a corporation was not among the 500 or the Second 500 in 1980

*Does not include excise taxes; see the explanation of "sales" on page 200

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

†Average for the year; see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200

††Figures are for fiscal year ending November 30, 1981

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF SALES %	SALES RANK	NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY %	EQUITY RANK	EARNINGS PER SHARE '81($)	'80($)	'71($)	GROWTH RATE 1971-81 %	GROWTH RATE 1971-81 RANK	TOTAL RETURN TO INVESTORS 1981 %	1981 RANK	1971-81 AVERAGE %	1971-81 AVERAGE RANK	INDUSTRY CODE
3,350	194	2.9	318	6.6	376	0.98	0.11	0.55	5.95	264	(20.00)	325	14.99	111	26
6,416	28	7.5	120	18.2	133	3.37	2.48	1.04	12.48	183	42.41	61	7.07	218	36
2,196†	332	—		—		N.A.	N.A.	N.A.	—		—		—		20
5,101	74	5.2	198	10.6	315	2.71	4.17	1.42	6.68	256	(28.67)	369	1.43	288	47
6,880	21	8.8	83	15.7	194	2.78	3.06	0.50	18.72	93	5.43	209	23.95	30	45
6,500	26	—		—		(1.32)	(1.65)	0.81	—		(27.50)	363	(4.24)	346	38
6,359	30	7.4	122	14.1	236	4.15	3.87	1.46	11.01	206	3.42	222	—		22
7,600	9	5.1	206	16.4	169	2.02	1.75	(3.39)‡	—		9.40	185	24.48	26	36
6,300	33	4.1	253	11.9	284	2.27	2.96	1.35**	5.33	270	(8.63)	270	10.30	170	27
5,700	53	7.8	112	17.0	155	5.74	5.03	1.32	15.83	130	60.58	30	12.34	146	34
5,700	54	8.6	90	16.5	164	4.41	3.91	1.09	15.00	143	36.17	81	9.84	180	27
889	468	31.4	2	19.3	108	1.54	1.39	0.35	15.97	126	(35.45)	398	20.18	57	10
4,636	96	10.3	56	26.4	25	1.25	1.07	N.A.	—		(42.72)	426	—		44
8,384	5	12.4	33	12.2	277	3.68	4.12	1.28‡	11.14	204	(5.18)	250	10.27	171	10
7,171	15	6.0	169	14.5	226	2.75	2.65	(5.39)	—		(25.64)	357	11.72	153	36
4,200	127	17.2	8	32.8	12	36.02	23.37	N.A.	—		—		—		45
4,700	94	5.0	211	16.5	166	3.27	2.84	0.51	20.42	77	38.16	72	3.53	264	45
2,600	274	8.1	103	23.8	45	1.45	1.31	0.37	14.63	147	16.93	146	(1.21)	319	49
4,900	85	2.4	347	9.8	330	1.90	2.03	0.89	7.88	238	(3.75)	246	6.88	220	40
5,000	80	9.8	63	20.0	87	1.81	1.90	1.39	2.68	290	4.44	218	2.05	277	42
4,150	128	2.6	339	9.9	325	N.A.	3.41‡	(0.21)‡	—		—		—		26
5,430	63	6.2	153	17.8	143	5.37	6.82	1.91**	10.89	208	(46.53)	437	10.38	169	45
1,725	408	11.5	45	16.0	186	3.14	5.22	0.69	16.36	120	(46.09)	435	7.28	217	10
4,920†	84	6.3	151	25.1	33	3.22	2.26	0.41	22.89	58	5.70	208	23.45	34	46
3,800	157	8.7	86	19.9	91	2.06	1.80	0.25	23.48	52	1.17	230	10.24	172	32
4,800	89	5.6	182	15.2	209	3.08	2.19	0.82	14.15	156	43.74	60	1.54	286	45
650	478	—	442	0.3	439	0.03	1.24	(1.23)‡	—		(33.22)	388	9.51	185	20
1,060	462	8.3	96	21.5	68	1.38	0.98	(0.02)	—		(38.69)	410	46.27	1	28
4,710	92	1.1	401	4.8	397	0.96	2.22	1.22	(2.37)	308	(39.43)	414	(7.28)	366	38
3,525	182	7.2	131	16.5	165	3.31	1.84	0.86	14.43	148	54.90	39	3.90	255	30
7,496	11	7.5	119	16.7	158	2.47	2.60	0.57	15.79	131	(19.40)	322	(3.98)	343	43
1,999	371	8.9	80	17.5	147	2.60	2.27	0.47	18.66	94	22.60	127	0.97	295	30
2,960	224	2.3	349	10.8	311	2.76	3.33	N.A.	—		17.52	140	—		45
3,844	155	5.3	195	16.4	168	3.42**	2.05	0.83	15.21	139	6.22	204	0.07	304	28
7,000	19	5.4	193	14.2	234	8.08	6.81	2.21	13.84	162	70.54	25	15.78	96	22
3,140	212	7.6	116	22.3	54	2.31	1.77	0.80	11.19	203	51.27	42	9.70	183	49
8,748	4	2.2	352	7.2	369	2.25	2.61	1.81	2.20	293	9.06	189	(1.16)	318	38
3,600	175	1.7	368	5.9	342	1.63	(1.20)	1.02	4.80	276	(21.07)	329	0.59	300	34
8,198	6	7.4	125	15.2	210	2.62	2.38	0.57	16.48	119	6.61	201	—		27
7,700	8	4.1	250	223.5	442	1.31	0.84	2.07	(4.47)	314	5.70	207	(18.21)	378	27
1,933†	381	9.6	68	27.3	18	16.37	8.78	2.73	19.62	83	10.03	182	15.55	100	20
6,002	40	6.9	135	20.6	76	1.88	1.73	0.43	15.90	128	5.18	211	14.16	124	46
6,198	37	0.3	431	0.9	433	0.20	2.54	0.91	(14.06)	328	(4.26)	247	9.88	179	22
5,764	49	0.9	414	3.0	419	1.16	(2.70)	1.22	(0.50)	299	(36.68)	399	5.10	240	32
5,800	48	2.7	333	8.7	346	1.49	1.80	1.57	(0.52)	300	16.75	147	1.69	282	45
4,053	132	0.2	434	0.7	436	0.21	4.78	0.54	(9.01)	322	(20.00)	326	9.36	186	45
2,076	357	—		—		(0.54)	1.08	1.62	—		(5.55)	254	(0.81)	315	49
2,456	303	11.8	40	22.2	56	0.70	N.A.	N.A.	—		—		—		44
10,621	1	2.6	337	11.8	287	2.96	1.89	1.42	7.62	241	91.46	17	18.80	63	23
3,534†	181	2.7	328	11.5	293	2.93	2.73	1.13	10.00	215	21.18	129	3.81	257	47

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDER EQUITY ($000)	STOCKHOLDER EQUITY RANK
601	626	**Management Assistance** (New York)[3]	332,186	199,264	160	9,415**	235	93,519	174
602	680	**C.R. Bard** (Murray Hill, N.J.)	329,915	222,583	123	22,502	91	143,887	75
603	592	**Stewart-Warner** (Chicago)	328,821	234,976	107	15,374	148	178,212	36
604	639	**H.B. Fuller** (St. Paul)[17]	328,682	157,997	233	13,587	173	75,842	238
605	607	**Dibrell Brothers** (Danville, Va.)[16]	328,142	90,921	414	5,395	338	39,632	406
606	780	**Holly Sugar** (Colorado Springs, Colo.)[7]	326,599	158,251	232	14,193	157	90,088	193
607	619	**General Portland** (Dallas)[18]	326,152	324,321	42	9,081	241	185,457	31
608	666	**Condec** (Old Greenwich, Conn.)[4]	325,131	279,007	68	3,404**	376	79,743	222
609	629	**Mine Safety Appliances** (Pittsburgh)	324,237	221,200	126	20,577	100	126,961	99
610	646	**Katy Industries** (Elgin, Ill.)	323,822	315,398	49	17,621	128	168,530	50
611	658	**Athlone Industries** (Parsippany, N.J.)	323,646	203,412	153	14,020	162	58,895	312
612	641	**Triangle Industries** (Holmdel, N.J.)	320,397	145,393	266	1,371	417	53,540	338
613	605	**Amerace** (New York)	319,998	214,355	139	8,338	262	117,756	117
614	575	**Interpace** (Parsippany, N.J.)	319,938	233,704	108	8,897	244	150,679	68
615	652	**Florida Steel** (Tampa, Fla.)[3]	319,524	211,223	142	19,919	110	104,315	155
616	589	**SPS Technologies** (Jenkintown, Pa.)	319,099	218,274	132	22,375	92	121,638	108
617	651	**Standard Register** (Dayton, Ohio)	318,105	160,173	227	15,381	147	101,681	160
618	627	**Refinemet International** (Woonsocket, R.I.)[7,19]	316,880	207,088	147	4,077	365	22,033	473
619	726	**General American Oil Co. of Texas** (Dallas)[16]	315,532	524,077	11	52,100	6	419,868	3
620	688	**Crystal Oil** (Shreveport, La.)	315,386	409,256	20	1,186	422	69,791	264
621	572	**Manhattan Industries** (New York)[10]	314,865	145,863	261	5,175	345	48,216	371
622	671	**Medtronic** (Minneapolis)[6]	313,560	313,197	51	41,872	15	209,541	19
623	695	**Commerce Clearing House** (Chicago)	312,617	251,715	86	28,773	53	60,548	299
624	741	**Advanced Micro Devices** (Sunnyvale, Calif.)[7]	309,391	224,694	118	24,684	74	118,600	116
625	617	**National-Standard** (Niles, Mich.)[3]	309,280	189,437	174	1,110	424	106,835	147
626	718	**Goulds Pumps** (Seneca Falls, N.Y.)	308,674	205,874	150	25,737	67	107,937	143
627	648	**Lancaster Colony** (Columbus, Ohio)[16]	307,694	182,072	187	10,492	215	81,320	215
628	654	**Greif Bros.** (Delaware, Ohio)[13]	307,039	188,278	176	25,193	71	158,364	57
629	689	**Sealed Power** (Muskegon, Mich.)	304,218	221,887	125	26,597**	63	144,375	74
630	668	**Eastmet** (Cockeysville, Md.)[16]	304,148	207,125	146	178	440	75,381	241
631	649	**Pacific Lumber** (San Francisco)	303,231	288,440	59	50,782	7	209,934	18
632	635	**Republic** (Los Angeles)[4]	303,227	201,478	154	11,878	194	95,424	168
633	674	**Bassett Furniture Industries** (Bassett, Va.)[17]	301,079	200,923	158	25,175	72	170,952	44
634	647	**Ameron** (Monterey Park, Calif.)[17]	300,595	236,329	106	15,686	142	106,454	148
635	701	**Wolverine World Wide** (Rockford, Mich.)	299,133	152,395	242	15,541	145	88,187	192
636	663	**Manitowoc** (Manitowoc, Wis.)[16]	297,226	222,601	122	30,262	45	156,359	62
637	699	**Petrolite** (St. Louis)[13]	297,208	197,783	162	27,757	57	129,864	91
638	733	**Ocean Spray Cranberries** (Plymouth, Mass.)[14]	296,300	161,538	225	N.A.‡		42,370	394
639	746	**Pogo Producing** (Houston)	295,995	771,930	3	67,745	3	281,141	9
640	781	**ROLM** (Santa Clara, Calif.)[16]	294,576	206,914	148	23,777	80	121,834	106
641	732	**Alberto-Culver** (Melrose Park, Ill.)[3]	294,369	145,963	260	6,023	322	64,700	280
642	623	**Avondale Mills** (Sylacauga, Ala.)[14]	293,510	136,918	289	4,026	366	93,304	175
643	•	**Dominion Textile (USA)** (New York)[1]	293,093	193,314	170	2,723	390	21,920	474
644	•	**General Felt Industries** (Saddle Brook, N.J.)	293,059	158,749	230	6,636	306	26,653	457
645	669	**S.S. Pierce** (Dundee, N.Y.)[4]	291,236	129,747	304	2,729	389	34,430	429
646	681	**Millipore** (Bedford, Mass.)	290,327¶	251,100	87	10,579	214	151,181	65
647	597	**Hanna Mining** (Cleveland)	289,685	626,797	8	44,016	11	438,486	2
648	•	**Newpark Resources** (Metairie, La.)	289,149	268,495	74	22,972	84	124,748	102
649	673	**CHB Foods** (Terminal Island, Calif.)[16]	288,828	130,510	302	4,002	367	36,902	420
650	757	**Mohawk Data Sciences** (Parsippany, N.J.)[6]	287,370	268,242	75	19,118	113	157,193	60

N.A. available

•Indicates that a corporation was not among the 500 or the Second 500 in 1980

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

†Average for the year; see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[16]Owned by Lafarge Coppée 55%.

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF SALES %	SALES RANK	NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY %	STOCKHOLDERS' EQUITY RANK	EARNINGS PER SHARE '81($)	'80($)	'71($)	GROWTH RATE 1971-81 %	GROWTH RATE 1971-81 RANK	TOTAL RETURN TO INVESTORS 1981 %	1981 RANK	1971-81 AVERAGE %	1971-81 AVERAGE RANK	INDUSTRY CODE
5,629	57	2.8	322	10.1	321	1.16**	0.05	0.48**	9.22	223	(25.07)	353	13.75	129	44
6,135	38	6.8	140	15.6	198	2.30	1.55	0.68	12.96	178	49.79	47	0.68	299	38
7,100	16	4.7	231	8.6	347	2.38	2.86	1.49	4.79	277	4.89	213	7.59	213	34
3,300	199	4.1	251	17.9	141	2.97	2.16	0.54	18.59	96	103.67	11	9.81	182	28
1,730†	405	1.6	370	13.6	246	4.01	2.73	0.98	15.13	140	27.18	109	—		21
1,250	448	4.3	242	15.8	192	8.96	3.37	0.83**	26.86	34	(14.25)	298	18.42	64	20
2,300	321	2.8	323	4.9	396	N.A.	3.65	1.61	—		—		—		32
5,000	78	1.0	403	4.3	403	0.86**	0.68	0.07‡	28.51	28	(16.83)	311	8.61	197	34
6,300	32	6.3	150	16.2	178	5.43	4.34	0.77**	21.57	65	(15.54)	302	22.29	44	38
5,974	44	5.4	191	10.5	319	2.77	5.44**	1.27**	8.11	236	(27.76)	365	(1.60)	325	45
3,400†	189	4.3	243	23.8	44	5.16	3.04	(0.64)‡	—		32.41	97	27.53	18	33
2,500	289	0.4	425	2.6	421	0.62	0.85	0.23‡	10.42	212	0.20	232	1.74	281	33
5,159*	72	2.6	340	7.1	372	2.77	3.51	2.20	2.33	292	(8.96)	271	4.47	250	30
4,300	119	2.8	324	5.9	387	2.02	3.32	1.34	4.19	281	(7.05)	261	4.98	243	32
2,700	258	6.2	154	19.1	112	3.37	3.15	0.67	17.53	108	(7.33)	265	16.69	82	33
5,749	50	7.0	133	18.4	126	4.66	4.56	(0.66)	—		(32.13)	384	17.19	76	34
4,368	113	4.8	221	15.1	212	7.06	6.46	0.83	23.87	51	13.38	172	15.69	98	27
1,084	461	1.3	389	18.5	120	0.90	1.70**	0.20**	16.23	124	(60.76)	454	—		33
543	486	16.5	10	12.4	272	2.11	2.34	0.49**	15.72	132	(23.47)	341	18.18	67	10
688	476	0.4	428	1.7	428	0.06	0.48	(0.05)	—		(12.83)	290	32.48	9	29
5,200	69	1.6	371	10.7	312	1.53	(5.21)	0.79	6.83	254	81.21	21	1.68	284	23
4,792	91	13.4	23	20.0	89	2.70	2.52	0.21	29.10	25	(5.42)	253	10.78	163	38
5,100	75	9.2	73	47.5	2	3.20	2.56	0.56	19.04	90	96.45	15	11.40	157	27
9,915	2	8.0	108	20.8	73	1.55	1.47	N.A.	—		(48.91)	441	—		36
3,769	162	0.4	429	1.0	432	0.27	1.29	1.03	(12.53)	325	14.61	160	(2.77)	330	33
3,900	150	8.3	95	23.8	13	1.47	1.12	0.21	21.48	66	(6.04)	258	—		45
5,000	79	3.4	297	12.9	261	2,10	1.51	0.72	11.30	199	32.53	96	3.14	270	32
4,000†	133	8.2	98	15.9	189	1.88[20]	1.60[20]	0.44[20]	15.63	134	(30.92)	379	—		26
4,533†	102	8.7	85	18.4	124	5.50**	2.45	1.17	16.74	116	38.63	70	14.45	121	40
2,179	335	0.1	441	0.2	440	0.04	2.27	N.A.			(43.85)	430	—		33
4,000†	135	16.7	9	24.2	39	2.09	1.74	0.42	17.41	111	(15.95)	305	20.87	53	45
5,000	81	3.9	261	12.4	267	4.05	4.44	(21.29)[8]‡	—		(5.06)	249	1.58	285	27
6,800	24	8.4	94	14.7	221	3.60	3.10	1.96	6.27	260	29.04	103	(3.57)	339	25
3,200	203	5.2	202	14.7	219	6.04	5.03	1.83	12.68	181	5.81	205	11.68	154	32
7,209	13	5.2	204	17.6	145	2.44	2.29	0.41	19.53	85	3.06	224	10.15	174	31
3,900	149	10.2	59	19.4	107	2.82	2.36	0.41	21.27	68	20.44	131	30.87	11	45
2,100	348	9.3	71	21.4	69	2.33	2.10	0.35	20.87	72	(12.45)	287	22.27	45	28
2,100	346	—		—		N.A.	N.A.	N.A.	—		—		—		20
200	498	22.9	4	24.1	40	2.60	2.13	N.A.	—		(16.66)	308	12.62	141	10
4,414	109	8.1	104	19.5	102	1.39	1.09	N.A.	—		(31.55)	381	—		36
4,555	101	2.0	360	9.3	335	1.56	2.61	1.12	3.37	288	(10.79)	281	(1.43)	321	43
4,482	106	1.4	382	4.3	401	1.82	3.13	2.47	(3.01)	311	8.73	192	1.11	291	22
2,700†	263	0.9	410	12.4	271	N.A.	N.A.	N.A.	—		—		—		22
2,790	243	2.3	350	24.9	34	669.00	470.00	N.A.	—		—		—		25
2,156	337	0.9	409	7.9	356	2.21	1.93	0.76	11.26	201	—		—		20
3,860	154	3.6	281	7.0	374	0.79	1.40	0.34	8.80	227	(38.24)	409	1.45	287	38
7,715	7	15.2	12	10.0	324	4.94	4.34	3.35	3.96	282	8.34	194	(0.15)	308	10
2,950	226	7.9	109	18.4	125	1.74	1.16	0.14	28.66	26	(27.14)	362	21.51	48	10
3,500	183	1.4	381	10.8	310	1.28	0.35	0.30‡	15.61	135	(15.60)	303	5.96	232	20
5,300	65	6.7	143	12.2	279	1.60	1.67	0.08[8]	34.93	9	(40.53)	419	(3.86)	342	44

[19]Name changed from Ag-MET September 18, 1980.
[20]Class A and B combined

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS EQUITY ($000)	STOCKHOLDERS EQUITY RANK
651	682	**U.S. Tobacco** (Greenwich, Conn.)	285,769	280,862	66	43,012	12	185,534	30
652	662	**Texas Industries** (Dallas)[1]	285,003	346,677	31	30,411	44	150,506	69
653	690	**Chesapeake Corp. of Virginia** (West Point, Va.)	282,569	278,772	69	26,230	66	164,656	52
654	•	**Marcade Group** (Jersey City, N.J.)[10]	280,973¶	112,214	340	3,444**	374	29,813	447
655	775	**Hon Industries** (Muscatine, Iowa)	280,657	173,000	204	19,050	116	86,453	195
656	708	**Lance** (Charlotte, N.C.)	280,386	143,685	270	22,874	86	111,590	133
657	716	**Hesston** (Hesston, Kans.)	280,144	166,401	213	3,792	370	50,687	357
658	703	**Omark Industries** (Portland, Ore.)[16]	280,076	254,228	83	23,045	83	133,187	88
659	664	**Compugraphic** (Wilmington, Mass.)[3]	278,145	219,916	128	(6,662)	476	89,934	184
660	799	**Scientific-Atlanta** (Atlanta)[16]	277,292	197,210	163	19,005	118	109,767	138
661	603	**Bird & Son** (East Walpole, Mass.)	276,624	151,300	249	(27,060)	492	77,161	230
662	596	**Skyline** (Elkhart, Ind.)[1]	276,572	136,109	291	6,684	304	114,500	127
663	742	**Computervision** (Bedford, Mass.)	275,293	231,796	110	31,763	38	144,993	72
664	683	**Mark Controls** (Evanston, Ill.)	274,437	178,291	192	4,932	349	64,904	278
665	692	**Bliss & Laughlin Industries** (Oak Brook, Ill.)	273,632	182,978	184	20,208	106	117,382	119
666	696	**Dinner Bell Foods** (Defiance, Ohio)[16]	272,012	38,891	497	2,485	395	23,438	469
667	704	**Ti-Caro** (Gastonia, N.C.)[3]	271,840	159,686	228	17,402	130	113,326	129
668	697	**SFN Companies** (Glenview, Ill.)[6]	270,813	237,410	103	36,091	24	178,447	35
669	720	**Russell** (Alexander City, Ala.)	270,426	200,983	157	24,037	77	122,853	105
670	827	**Dataproducts** (Woodland Hills, Calif.)[7]	270,125	238,262	101	17,207	132	151,497	64
671	650	**Allied Products** (Chicago)	269,662	152,214	245	597	434	51,394	351
672	679	**King-Seeley Thermos** (Prospect Heights, Ill.)[21]	268,700	185,475	181	20,316	103	128,187	94
673	698	**Thomas & Betts** (Raritan, N.J.)	268,600	227,913	116	33,363	34	177,595	39
674	694	**Southdown** (Houston)	268,164	297,110	56	36,275	23	142,415	79
675	931	**Nortek** (Cranston, R.I.)	267,883	174,524	199	9,600	230	61,661	296
676	761	**Bairnco** (New York)[22]	267,697	288,090	60	13,601	172	86,520	194
677	864	**U.S. Sugar** (Clewiston, Fla.)[3]	265,745§	324,436	41	42,417§	13	220,148	15
678	684	**P.H. Glatfelter** (Spring Grove, Pa.)	265,540	194,304	167	16,502	136	145,195	71
679	745	**John Blair** (New York)	265,303	145,772	262	13,637	171	76,106	236
680	778	**Elcor** (Midland, Tex.)[16]	265,145	133,317	298	1,957	405	41,956	396
681	727	**Donaldson** (Minneapolis)[4]	263,921	159,500	229	12,631	187	90,359	182
682	691	**CCI** (Tulsa)[5]	263,012	190,676	173	10,158	219	72,004	253
683	670	**Monogram Industries** (Santa Monica, Calif.)[16]	262,626	242,780	95	12,844	183	89,506	189
684	736	**Leggett & Platt** (Carthage, Mo.)	262,575	122,331	320	11,953	193	57,101	320
685	709	**Faberge** (New York)	262,252	195,007	166	284	438	120,971	111
686	714	**Lenox** (Lawrenceville, N.J.)	260,696	187,288	179	20,672	99	126,991	98
687	665	**UNC Resources** (Falls Church, Va.)	259,428	400,602	21	6,949	297	170,303	45
688	700	**Burndy** (Norwalk, Conn.)	256,764	217,594	134	32,839	36	133,422	86
689	725	**Overhead Door** (Dallas)	254,080	137,383	286	3,064	382	76,813	232
690	712	**Guilford Mills** (Greensboro, N.C.)[16]	253,377	132,299	299	20,682	98	86,408	197
691	660	**Salant** (New York)[17]	253,315¶	145,679	264	(6,508)	475	43,549	388
692	735	**Herman Miller** (Zeeland, Mich.)[1]	252,740	187,334	178	13,881	165	83,830	204
693	734	**Laclede Steel** (St. Louis)	252,722	137,432	285	3,935	368	62,745	290
694	756	**Betz Laboratories** (Trevose, Pa.)	252,545	165,650	216	28,815	51	126,799	100
695	693	**Dentsply International** (York, Pa.)	251,344	168,075	209	305	437	67,322	272
696	755	**Shaw Industries** (Dalton, Ga.)[16]	250,584	141,594	276	8,421	261	47,804	373
697	794	**Robbins & Myers** (Dayton, Ohio)[14]	250,315	150,893	250	13,429	176	68,652	270
698	532	**Toro** (Minneapolis)[4]	250,293	155,793	238	(13,068)	484	54,071	334
699	792	**Valmac Industries** (Memphis)[16]	248,839	137,959	284	845	430	24,587	464
700	752	**Kimball International** (Jasper, Ind.)[16]	248,450	145,727	263	15,111	150	98,515	166

•Indicates that a corporation was not among the 500 or the Second 500 in 1980

**Reflects an extraordinary credit of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

†Average for the year, see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

¶Includes sales from discontinued operations of at least 10%, see explanation of "sales" on page 200

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
3,476†	185	15.1	14	23.2	48	4.72	4.16	1.23	14.39	152	28.45	106	14.51	119	21
3,200	205	10.7	52	20.2	84	4.23	5.81	0.85	17.41	110	(13.02)	291	14.85	112	32
2,710	256	9.3	72	15.9	187	4.22	3.83	0.65	20.57	75	8.94	191	15.48	103	26
6,300	35	1.2	394	11.6	292	0.38**	0.47**	1.31	(11.64)	324	24.16	119	(18.71)	380	23
4,400	110	6.8	141	22.0	59	1.79	1.48	0.18	25.82	38	(2.49)	243	21.79	47	25
5,163	71	8.2	101	20.5	78	1.83	1.56	0.54	12.98	176	17.50	141	6.66	223	20
3,077†	217	1.4	384	7.5	364	0.78	(0.19)	1.11	(3.47)	313	(51.29)	445	(4.12)	344	45
4,600	99	8.2	97	17.3	152	3.22	3.57	0.41	22.89	57	(23.65)	343	15.55	101	34
4,334	114	—		—		(1.33)	1.72	0.25**	—		(62.92)	455	8.69	196	45
5,223	67	6.9	138	17.3	151	0.90	0.66	0.05	33.51	14	45.45	56	38.59	3	36
2,230	327	—		—		(6.43)	(0.83)	1.32	—		(37.52)	403	4.92	244	29
2,900	235	2.4	345	5.8	388	0.60	0.54	1.28	(7.30)	321	14.79	159	(9.93)	370	37
3,800	159	11.5	44	21.9	63	1.16	0.90	N.A.	—		(19.25)	321	—		44
4,942	83	1.8	367	7.6	363	0.88	1.61	0.28	12.13	189	(38.12)	407	9.98	176	38
2,870	237	7.4	123	17.2	153	3.03	2.58	0.67	16.29	123	35.82	83	15.98	92	33
1,700	411	0.9	411	10.6	314	1.53	2.44	0.77	7.11	249	(1.13)	237	—		20
5,450	62	6.4	148	15.4	205	3.16	2.88	0.94	12.89	180	31.38	98	16.75	80	22
2,635†	272	13.3	24	20.2	83	3.09	2.74	0.56	18.63	95	(30.58)	376	12.22	148	27
7,180	14	8.9	81	19.6	100	2.04	1.78	0.11	33.91	10	45.61	55	29.65	14	23
4,900	86	6.4	149	11.4	300	2.27	1.01	(1.66)	—		(42.99)	427	17.28	73	44
4,300	115	0.2	433	1.2	430	0.20	(0.82)	1.01	(14.95)	329	13.18	173	0.73	297	45
3,900	146	7.6	117	15.8	191	N.A.	N.A.	N.A.	—		—		—		34
3,100	216	12.4	32	18.8	115	4.31	4.22	0.99	15.85	129	17.39	143	11.18	160	36
1,300†	445	13.5	21	25.5	30	5.17	4.53‡	3.08**	5.32	271	(0.63)	234	17.65	70	32
3,420	188	3.6	287	15.6	201	2.75	1.41	(0.32)‡	—		49.32	49	2.72	273	34
2,791†	242	5.1	208	15.7	195	2.57	2.21	0.35	22.06	62	57.46	36	15.65	99	36
5,600†	59	16.0	11	19.3	109	8.66[a]	6.53	1.51	19.08	88	(15.37)	301	12.56	143	20
2,088	352	6.2	156	11.4	299	3.70	4.83	0.25	30.93	23	7.06	198	27.36	19	26
2,200	328	5.1	205	17.9	140	3.65	3.13	0.24‡	31.28	21	44.37	57	14.59	118	27
2,036	365	0.7	419	4.7	399	0.55	1.95**	(25.89)‡	—		(34.74)	393	—		29
3,643	169	4.8	223	14.0	238	2.45	1.60	0.39	20.17	79	15.15	154	10.20	173	45
3,027	220	3.9	267	14.1	235	1.62	1.57	(1.55)‡	—		40.00	67	12.43	145	40
3,900	147	4.9	218	14.3	229	6.71	8.19	(0.99)‡	—		25.94	116	16.32	87	34
5,300	66	4.6	233	20.9	72	3.14	2.06	0.52	19.70	81	85.49	20	14.85	113	25
2,800	240	0.1	439	0.2	441	0.05	0.38	1.14	(26.85)	332	(28.10)	367	2.99	271	43
4,300	120	7.9	110	16.3	174	4.64	4.26	1.35	13.14	172	16.26	151	5.69	234	46
4,470	108	2.7	331	4.1	408	0.65	(3.20)	0.19	13.09	174	(57.92)	451	(2.69)	329	34
4,698	95	12.8	29	24.6	37	2.64	1.93	0.30	24.29	48	1.62	228	16.62	83	36
3,900†	148	1.2	395	4.0	410	0.55	0.82	0.98	(5.61)	316	(18.59)	318	0.05	305	26
2,152	338	8.2	100	23.9	42	4.20	4.54	0.53	23.00	55	(24.45)	346	15.89	93	22
6,473	27	—		—		(2.02)	0.20	1.01	—		37.12	75	3.29	269	23
3,288	202	5.5	188	16.6	163	3.76	3.53	0.38	25.76	39	26.80	113	25.83	23	25
2,650	269	1.6	373	6.3	382	1.78	(0.44)	2.07**	(1.50)	304	11.11	177	11.87	152	33
2,200	329	11.4	46	22.7	52	1.83	1.50	0.24	22.52	60	26.87	112	8.28	203	28
4,000	137	0.1	438	0.5	438	0.07	1.35	1.04	(23.65)	331	14.34	163	1.06	292	38
2,800	241	3.4	301	17.6	146	1.65	1.10	0.46	13.62	167	28.95	105	0.73	298	22
4,391	112	5.4	192	19.6	101	5.66	4.58	0.61	24.95	46	(38.97)	413	16.96	79	36
2,652†	267	—		—		(2.66)	0.90	0.76	—		(43.11)	428	(4.85)	350	45
3,962	141	0.3	430	3.4	418	0.37	(3.55)	(0.21)**	—		(26.94)	361	12.56	142	20
5,200	70	6.1	161	15.3	206	2.88	2.91	N.A.	—		27.61	107	—		47

†Wholly owned by Household International

††Named changed from Keene April 9, 1981

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
701	871	**Puritan Fashions** (New York)	248,417	88,726	422	11,757	198	31,020	442
702	677	**Bibb** (Macon, Ga.)[7]	246,002	140,903	277	(7,917)	477	61,370	294
703	754	**American Sterilizer** (Erie, Pa.)	244,464	143,359	273	11,541	201	92,750	176
704	737	**Grow Group** (New York)[16]	243,480	122,677	318	5,227	343	42,939	390
705	715	**Crompton & Knowles** (New York)	243,412	143,480	271	8,571	257	74,889	242
706	750	**Dixie Yarns** (Chattanooga, Tenn.)	243,177	89,939	417	5,222	344	58,547	316
707	685	**Wean United** (Pittsburgh)	242,895	177,326	195	2,991	384	57,296	319
708	766	**RTE** (Waukesha, Wis.)	242,089	117,832	328	6,535	310	50,708	356
709	661	**Redman Industries** (Dallas)[7]	241,879	93,844	396	7,195	291	52,823	339
710	776	**Brunswick Pulp & Paper** (Brunswick, Ga.)	240,663	328,558	39	6,119	318	156,398	61
711	729	**Kaiser Cement** (Oakland, Calif.)	240,124	496,791	12	21,738	96	223,845	14
712	713	**Gleason Works** (Rochester, N.Y.)	239,936	191,394	172	8,892	245	110,970	136
713	730	**Stanley Home Products** (Westfield, Mass.)	239,412	166,001	214	16,549	135	91,689	177
714	918	**Inexco Oil** (Houston)	238,738	785,112	3	31,921	37	235,525	12
715	743	**McQuay-Perfex** (Minneapolis)	238,030	137,358	287	9,726	225	66,589	275
716	764	**Carter-Wallace** (New York)[7]	236,958	218,332	131	11,555	200	144,759	73
717	793	**Leslie Fay** (New York)[6]	236,936	87,387	425	8,214	266	49,373	363
718	771	**Anthony Industries** (City of Commerce, Calif.)	236,587	110,973	345	3,377	377	31,050	441
719	841	**Cooper Laboratories** (Palo Alto, Calif.)[13]	236,237	301,216	55	14,325	153	111,925	132
720	768	**Affiliated Publications** (Boston)	236,073	125,647	313	14,199	156	82,830	211
721	632	**Homestake Mining** (San Francisco)	235,581	351,932	27	28,822	50	294,274	8
722	657	**Howell** (Houston)	235,304	177,462	193	8,699	250	72,394	250
723	856	**Mary Kay Cosmetics** (Dallas)	235,296	100,976	376	24,155	76	61,952	293
724	719	**National Grape Co-Op. Assoc.** (Westfield, N.Y.)[14]	235,250	138,147	283	N.A.[9]		46,583	366
725	717	**Alabama By-Products** (Birmingham, Ala.)	234,994	267,360	76	14,050	161	129,165	93
726	759	**Pope & Talbot** (Portland, Ore.)	234,768	216,115	136	2,711	391	106,028	151
727	642	**Baker Industries** (Greenwich, Conn.)	234,588	342,935	32	(4,856)	467	115,289	124
728	783	**LeaRonal** (Freeport, N.Y.)[12]	234,205	41,413	496	8,038	272	29,434	450
729	762	**Blue Chip Stamps** (Los Angeles)	233,980	314,656	50	27,626	58	169,241	48
730	787	**Four-Phase Systems** (Cupertino, Calif.)	233,725	215,503	137	7,148	292	120,969	112
731	710	**Esterline** (Darien, Conn.)[13]	233,717	167,645	211	19,684	111	90,625	180
732	739	**Thomas Industries** (Louisville, Ky.)	233,565	133,548	296	12,246	190	82,930	209
733	770	**Noxell** (Cockeysville, Md.)	233,112	108,760	350	16,864	133	84,935	201
734	774	**Tampax** (Lake Success, N.Y.)	232,877	206,222	149	42,162	14	169,356	47
735	655	**Imperial Sugar** (Sugar Land, Tex.)	232,838	56,914	489	13,136	178	38,535	410
736	728	**Commercial Shearing** (Youngstown, Ohio)[13]	232,270	173,594	202	13,085	180	112,555	131
737	785	**Justin Industries** (Fort Worth)	232,160	208,423	144	5,430	337	76,358	235
738	722	**Huffy** (Miamisburg, Ohio)[16]	231,983	134,341	293	6,211	315	48,422	367
739	839	**Thermo Electron** (Waltham, Mass.)	230,913	188,932	175	8,850	247	84,526	202
740	687	**Philips Industries** (Dayton, Ohio)[7]	229,148	112,338	339	8,016	273	56,241	322
741	753	**Standard Products** (Cleveland)[16]	228,984	106,425	361	5,665	333	43,080	389
742	790	**Cubic** (San Diego, Calif.)[3]	228,244	133,345	297	11,029	208	62,210	292
743	748	**International Banknote** (New York)	227,627	163,911	221	9,803	223	47,264	376
744	740	**Barber-Greene** (Aurora, Ill.)[14]	227,411	162,324	223	3,060	383	66,565	276
745	951	**Sealaska** (Juneau, Alaska)	225,532	348,499	29	N.A.		N.A.	
746	802	**Kollmorgen** (Stamford, Conn.)	224,090	140,783	278	11,334	202	69,978	263
747	756	**Pentair** (St. Paul)	223,982	154,917	240	8,153	269	58,469	317
748	858	**Valley Industries** (St. Louis)[17]	222,766	151,766	247	14,468	152	71,144	258
749	744	**McNeil** (Akron, Ohio)	221,871	162,757	222	5,527	335	76,520	233
750	925	**Galveston-Houston** (Houston)	221,713	244,107	92	22,611	88	96,837	167

N.A. Not available

*Reflects an extraordinary credit of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

†Average for the year, see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			EARNINGS PER SHARE GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	INDUSTRY CODE
1,300	444	4.7	226	37.9	6	2.83	(0.91)	1.44**	6.99	251	104.56	9	3.54	262	23
6,000	42	—		—		(4.96)	1.14	(4.26)‡	--		16.22	153	1.76	280	22
3,694	166	4.7	227	12.4	268	1.29	1.01	0.64	7.26	247	48.90	51	(0.12)	307	38
2,100	341	2.1	359	12.2	278	0.91	1.06	0.29	12.12	190	(37.15)	401	7.36	215	28
2,534	285	3.5	290	11.4	296	2.51	2.22	0.69	13.78	163	38.05	74	10.59	165	28
4,300	117	2.1	358	8.9	343	5.41	5.09	2.30	8.93	225	—		—		22
2,855	238	1.2	393	5.2	393	0.77	(0.13)	(1.11)‡	—		(22.11)	333	(0.20)	309	45
2,727†	252	2.7	330	12.9	262	1.13	0.76	0.33	13.10	173	(5.31)	251	2.31	275	36
3,200	204	3.0	313	13.6	245	0.76	1.32	0.69	0.97	296	49.90	46	(5.58)	355	37
1,311	442	2.5	342	3.9	411	N.A.	N.A.	N.A.	--		—		—		26
1,695	415	9.1	77	9.7	331	2.89	3.45	0.90	12.37	184	(10.89)	282	9.63	184	32
4,700	93	3.7	277	8.0	355	1.72	3.26	1.05	5.06	274	(17.18)	312	(4.19)	345	45
4,200	126	6.9	136	18.0	136	6.16	5.55	2.13	11.20	202	(8.14)	268	3.90	254	43
862	470	13.4	22	13.6	248	1.32	0.94	0.22**	19.62	82	(23.33)	340	20.51	56	10
3,600	176	4.1	255	14.6	224	2.37	2.43	0.56‡	15.52	137	(13.24)	292	12.20	149	45
3,300	197	4.9	219	8.0	356	1.49	1.05	1.42	0.48	297	(5.42)	252	(3.15)	335	43
2,300	323	3.5	293	16.6	160	2.30	0.84	0.92	9.60	219	62.46	29	5.47	235	23
2,700	261	1.4	379	10.9	309	1.22	1.14	0.71	5.56	267	(16.35)	307	(3.06)	332	47
4,600	98	6.1	164	12.8	264	3.00	11.27**	0.78	14.42	149	(14.21)	297	2.60	274	42
2,330	320	6.0	168	17.1	154	2.74	2.49	N.A.	—		13.79	170	—		27
2,784	245	12.2	36	9.8	329	1.69	5.96	0.18**	25.10	45	(41.91)	422	23.55	32	10
363	492	3.7	278	12.0	281	1.54	2.33	0.09**	32.84	16	(48.62)	440	—		29
1,400	438	10.3	57	39.0	5	1.65	1.05	0.09	33.76	12	26.98	110	16.44	85	43
1,311	441	—		--		N.A.	N.A.	N.A.	—		—	*	—		20
2,906	229	6.0	170	10.9	308	8.00	3.95	3.29	9.29	222	14.23	165	—		10
1,700	412	1.2	399	2.6	422	0.45	1.80	0.61	(3.00)	310	(19.01)	320	11.14	161	26
1,100	457	—		—		(0.41)	2.49	N.A.	—		(65.08)	456	—		28
268	495	3.4	295	27.3	17	1.66	1.24	0.19	24.20	49	(25.30)	356	18.23	65	28
3,300†	201	11.8	39	16.3	171	5.33	3.94	1.69	12.17	187	38.12	73	8.30	202	20
4,511	103	3.1	311	5.9	386	1.26	1.06	N.A.	—		52.38	41	—		44
3,650	168	8.4	93	21.7	65	2.32	2.51	0.11**	35.65	8	(9.83)	275	23.21	35	45
3,300†	198	5.2	201	14.8	218	1.84	1.62	0.64	11.14	205	46.30	52	4.74	248	36
1,250	449	7.2	127	19.9	92	3.45	3.01	0.93	14.01	159	38.59	71	0.54	301	43
2,600	276	18.1	6	24.9	35	3.74	3.22	1.99	6.51	258	18.02	137	(3.22)	336	26
641	480	5.6	179	34.1	11	64.89	36.56	N.A.	—		—		—		20
2,966	223	5.6	181	11.6	289	1.37	1.51	0.36	14.30	154	9.17	187	20.94	51	45
4,850	87	2.3	348	7.1	370	1.38	2.09	0.71	6.87	253	(10.13)	276	—		32
3,137	213	2.7	332	12.8	263	1.38	2.10	0.15	24.85	47	(22.15)	334	14.33	122	47
3,000	221	3.8	269	10.5	318	1.90	1.88	0.35	18.43	99	(30.89)	378	(0.04)	306	45
3,444	187	3.5	292	14.3	232	1.32	1.28	0.65	7.34	245	104.11	10	(0.42)	311	34
4,200	125	2.5	344	13.1	255	4.50	(2.19)	2.01	8.39	233	58.62	34	3.39	268	40
3,800	158	4.8	222	17.7	144	2.79	2.06	0.54	17.85	107	119.11	6	15.80	95	36
4,400	111	4.3	246	20.7	74	0.60	0.10	(0.27)‡	—		170.00	2	17.20	75	27
2,993	222	1.3	386	4.6	400	1.34	2.05	0.24**	18.77	92	(5.61)	255	13.72	131	45
900	466	—		—		N.A.	3.77**	N.A.	—		—		—		20
4,500	105	5.1	209	16.2	182	1.30	1.23	(0.40)‡	—		(12.64)	288	25.31	25	36
2,400	315	3.6	283	13.9	239	2.81	4.17	0.17	32.38	18	9.16	188	—		26
1,620	420	6.5	146	20.3	80	1.65	0.59	N.A.	—		(8.61)	269	—		34
4,000	134	2.5	343	7.2	368	2.36	1.96	1.67	3.52	287	(0.71)	235	5.03	242	45
2,400	313	10.2	58	23.3	47	3.89	2.16	(0.01)	—		(19.86)	324	—		45

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDER EQUITY ($000)	STOCKHOLDER EQUITY RANK
751	706	**Portec** (Oak Brook, Ill.)	221,180	120,787	322	7,902	275	70,457	261
752	786	**Duplex Products** (Sycamore, Ill.)[13]	221,018	92,659	401	9,543	231	58,899	311
753	840	**Early California Industries** (Los Angeles)[7]	220,815	156,241	237	2,272	398	27,576	454
754	767	**Bobbie Brooks** (Cleveland)[6]	220,541¶	87,005	426	(2,388)	456	29,655	449
755	707	**Western Pacific Industries** (New York)	220,265	242,875	93	30,097	46	116,526	120
756	731	**Chelsea Industries** (Boston)[3]	219,630¶	106,014	363	3,641	372	44,673	387
757	795	**Macmillan Ring-Free Oil** (New York)	218,525	45,462	495	864	429	11,582	492
758	848	**GCA** (Bedford, Mass.)	218,490	167,787	210	21,911	94	95,169	170
759	801	**Smithfield Foods** (Alexandria, Va.)[6]	218,255	38,014	498	873	427	12,292	488
760	798	**BIC Pen** (Milford, Conn.)	217,707	150,808	251	8,228	265	83,440	208
761	807	**Park-Ohio Industries** (Cleveland)	216,458	184,963	182	11,855	195	89,773	185
762	631	**Lamson & Sessions** (Cleveland)	215,975	164,869	219	(8,995)	480	59,176	307
763	898	**Valmont Industries** (Valley, Neb.)	215,696	120,490	324	10,143	220	46,885	379
764	902	**Bastian Industries** (New York)[4,23]	215,191	117,156	329	2,353**	397	20,570	478
765	747	**Rochester & Pittsburgh Coal** (Indiana, Pa.)	214,279	205,583	151	12,120	192	82,871	210
766	782	**Loctite** (Newington, Conn.)[16]	213,912	181,225	188	10,377	217	121,125	110
767	896	**Loral** (New York)[7]	212,628	216,315	135	20,548	101	135,920	84
768	•	**Reynolds & Reynolds** (Dayton, Ohio)[3]	212,236	138,810	282	7,118	293	79,925	221
769	826	**Mohawk Rubber** (Hudson, Ohio)	210,986	100,411	378	8,460	260	51,709	349
770	763	**Twin Disc** (Racine, Wis.)[16]	210,256	146,250	259	8,578	256	81,433	214
771	813	**American Business Products** (Atlanta)	209,817	88,186	424	7,062	294	51,880	348
772	809	**CTS** (Elkhart, Ind.)	209,572	142,126	274	13,106	179	116,034	122
773	769	**California Portland Cement** (Los Angeles)[6]	208,533	324,816	40	22,651‡	87	193,062	24
774	•	**Tandem Computers** (Cupertino, Calif.)[3]	208,397	255,971	81	26,549	64	204,810	20
775	861	**Towle Manufacturing** (Boston)	208,393	177,421	194	10,834	211	54,758	329
776	837	**Phoenix Steel** (Claymont, Del.)	207,469	156,462	235	2,012**	403	4,339	495
777	791	**Union** (Verona, Pa.)[16]	205,870	154,075	241	4,554	357	68,788	268
778	996	**Coachmen Industries** (Middlebury, Ind.)	205,510	68,915	467	2,095	402	35,140	425
779	738	**Brown & Sharpe Mfg.** (North Kingstown, R.I.)	205,356	171,238	206	6,040	321	88,561	191
780	789	**Halstead Industries** (Zelienople, Pa.)	205,108	104,618	367	(3,534)	461	48,295	370
781	880	**Stepan Chemical** (Northfield, Ill.)	204,522	176,068	196	6,545	309	53,888	336
782	847	**Salem Carpet Mills** (Winston-Salem, N.C.)	204,403	62,805	480	(1,616)	451	20,752	477
783	814	**Vermont American** (Louisville, Ky.)	203,940	145,653	265	12,565	188	79,986	220
784	838	**W.A. Krueger** (Scottsdale, Ariz.)	203,259	98,459	384	7,833	278	42,671	391
785	797	**Wynn's International** (Fullerton, Calif.)	202,895	139,815	281	10,646	212	73,786	247
786	842	**Oglebay Norton** (Cleveland)	202,293	283,801	63	23,919	79	141,119	82
787	849	**United Industrial** (New York)	202,148	117,873	327	11,076	207	54,257	332
788	808	**NIBCO** (Elkhart, Ind.)	201,165	157,109	234	8,886	246	64,140	283
789	870	**Work Wear** (Cleveland)	200,087	141,805	275	4,340	361	48,889	365
790	828	**Commodore** (Syracuse, Ind.)[16]	199,302	56,239	491	4,802**	353	5,486	494
791	805	**Brush Wellman** (Cleveland)	199,131	195,676	165	19,294	112	127,130	97
792	818	**American Ship Building** (Tampa, Fla.)[3]	196,981	132,217	300	14,134	158	58,672	314
793	867	**Wausau Paper Mills** (Wausau, Wis.)[14]	196,544	111,093	344	2,650	392	34,743	427
794	937	**Unifi** (Greensboro, N.C.)[16]	196,310	65,992	473	7,644**	282	24,483	465
795	751	**Champion Home Builders** (Dryden, Mich.)[12]	195,293	57,497	488	(1,599)	450	28,195	452
796	843	**Van Dorn** (Cleveland)	195,168	108,450	353	6,692	302	54,644	331
797	836	**Cagle's** (Atlanta)[7]	195,073	49,620	493	(1,291)	448	14,216	485
798	543	**Curtiss-Wright** (Wood-Ridge, N.J.)	194,929	293,871	58	85,308	2	203,063	21
799	862	**Stride Rite** (Cambridge, Mass.)[17]	194,829	112,062	342	9,165	238	56,179	323
800	832	**Pauley Petroleum** (Los Angeles)[14]	193,937	107,679	356	(3,737)	463	22,035	472

•Indicates that a corporation was not among the 500 or the Second 500 in 1980.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

†Average for the year; see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[23]Name changed from Nytronics November 24, 1980.

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
2,460	302	3.6	288	11.2	304	2.07	2.35	0.56	13.97	160	(17.60)	313	13.06	138	37
2,017	366	4.3	245	16.2	181	2.49	2.89	0.35	21.68	64	5.43	210	16.53	84	27
1,300	443	1.0	404	8.2	352	0.81	1.32	(1.36)‡	—		20.00	132	7.92	208	20
2,500	290	—		—		(0.52)	(1.16)	0.51‡	—		(30.77)	377	(17.07)	377	23
4,000	140	13.7	20	25.8	29	12.95	11.68	1.90**	21.16	70	14.44	162	15.18	108	38
2,700	257	1.7	369	8.2	353	1.61	1.05	0.91	5.87	266	34.63	87	3.89	256	30
268	494	0.4	427	7.5	365	(0.08)	0.22	(0.29)	—		—		—		29
2,652	268	10.0	61	23.0	50	2.60	1.81	0.26**	25.89	37	(46.17)	436	24.13	28	45
2,070	359	0.4	426	7.1	371	0.45	1.90	1.80**	(12.94)	326	17.83	139	—		20
2,300	325	3.8	273	9.9	328	1.27	1.91	0.92	3.28	289	(33.66)	389	(1.08)	316	47
2,600	278	5.5	190	13.2	254	2.14	2.25	0.59	13.75	164	(37.82)	404	20.57	55	34
2,446	306	—		—		(1.71)	(2.95)	0.30‡	—		(37.06)	400	4.82	245	37
1,840	391	4.7	230	21.6	66	3.93	2.35	0.35	27.36	32	63.43	28	13.42	133	34
2,787	244	1.1	400	11.4	297	0.82**	1.79	(104.53)‡	—		(25.00)	351	0.45	302	45
2,715	255	5.7	178	14.6	223	7.75	8.95	0.43	33.53	13	—		—		10
2,572	281	4.9	220	8.6	348	1.05	2.65	0.29	13.73	165	(23.58)	342	7.05	219	28
3,900	151	9.7	67	15.1	213	2.00	1.84	(0.37)‡	—		(20.88)	328	35.04	6	36
3,329	196	3.4	302	8.9	344	1.51	2.33	0.90	5.31	272	1.62	229	(1.12)	317	27
1,615	422	4.0	258	16.4	170	4.24	2.63	1.50	10.95	207	23.43	122	7.80	211	30
2,907	228	4.1	256	10.5	316	2.38	2.89	1.16	7.45	243	7.48	197	11.40	158	45
3,400	191	3.4	300	13.6	247	1.87	2.15	0.52	13.65	166	(9.61)	274	4.72	249	27
6,826†	22	6.3	152	11.3	302	2.95	2.33	1.19	9.50	221	35.01	85	8.23	204	36
1,500	429	10.9	50	11.7	288	2.68‡	4.29	1.08	9.51	220	19.41	134	11.08	162	32
2,730	250	12.7	30	13.0	260	0.72	0.35	N.A.	—		9.54	184	—		44
2,400	312	5.2	203	19.8	94	2.55	2.20	0.60	15.57	136	16.43	149	16.31	88	46
1,800	396	1.0	408	46.4	3	0.05**	(0.03)**	(1.42)	—		(22.22)	335	(5.25)	354	33
4,000	136	2.2	353	6.6	377	0.81	0.86	0.27	11.61	195	(5.77)	256	(1.73)	326	45
2,488	297	1.0	405	6.0	385	0.58	(2.09)	0.40	3.79	283	35.97	82	(1.59)	324	37
4,290	122	2.9	315	6.8	375	1.93	4.81	(0.01)**	—		(25.02)	352	9.93	178	45
2,081	354	—		--		(32.59)	6.07	13.77	—		—		—		33
899	467	3.2	303	12.1	280	1.74	1.45	0.55	12.21	186	51.13	43	13.73	130	28
2,500	293	—		—		(0.23)	0.05	N.A.	—		—		—		22
3,642†	170	6.2	158	15.7	196	2.12	1.56	0.31	21.20	69	13.81	169	20.65	54	34
2,650	270	3.9	268	18.4	128	2.16	2.02	0.59	13.86	161	6.54	202	16.00	91	27
2,366	317	5.2	199	14.4	228	2.92	2.06	0.76	14.41	151	49.59	48	6.11	228	40
3,111	214	11.8	38	16.9	156	6.77	4.92	1.29	18.03	105	14.92	158	16.03	90	10
4,300	118	5.5	189	20.4	79	3.60	2.59	0.54	20.89	71	29.74	102	23.10	36	36
3,144	211	4.4	237	13.9	242	4.80	5.82	0.12	44.61	5	—		—		34
6,408	29	2.2	356	8.9	345	1.43	1.03	1.37	0.43	298	(19.46)	323	1.86	279	23
2,800	239	2.4	346	87.5	1	0.44**	(1.16)	(1.23)‡	—		42.02	64	(13.09)	374	37
2,335	319	9.7	66	15.2	211	3.33	3.17	0.70	16.88	115	12.02	175	18.84	62	33
2,100	344	7.2	129	24.1	41	2.27	1.47	0.61	14.04	158	(7.18)	263	4.30	251	37
1,775	402	1.3	385	7.6	362	0.68	1.74	0.20	13.02	175	(38.17)	408	—		26
1,225	451	3.9	265	31.2	14	2.09**	0.36	N.A.	—		227.33	1	—		22
2,900	231	—		—		(0.05)	(0.19)	0.15	—		58.19	35	(11.88)	373	37
2,069†	360	3.4	296	12.2	275	2.32	2.01	1.05	8.25	234	3.38	223	4.76	246	34
2,731	248	—		—		(0.56)	(0.69)	(0.22)	—		(28.60)	368	(6.79)	361	20
2,573	280	43.8	1	42.0	4	17.99	4.75	0.18**	58.48	1	2.42	225	15.36	107	45
4,300	121	4.7	229	16.3	172	2.95	2.08	1.42	7.59	242	36.29	79	5.99	230	31
225	496	—		—		(1.30)	0.65	(1.01)**	—		(49.40)	442	9.14	191	29

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
801	817	**Florida Rock Industries** (Jacksonville, Fla.)[3]	193,674	134,175	294	13,445	175	74,347	244
802	823	**KDI** (Cincinnati)	192,880	96,260	390	5,702	329	24,723	463
803	824	**Tultex** (Martinsville, Va.)[17]	191,975	112,148	341	10,066	221	51,917	347
804	•	**Varco International** (Orange, Calif.)	191,620	178,713	190	22,306	93	71,338	255
805	816	**Fischer & Porter** (Horsham, Pa.)	191,112	147,292	256	1,354	418	52,333	345
806	831	**Russ Togs** (New York)[10]	190,431	96,956	387	9,079	242	61,639	297
807	850	**Rexham** (New York)	189,854	125,560	315	9,445	234	72,018	252
808	•	**Friona Industries** (Friona, Tex.)[16]	189,842	47,377	494	2,262	399	21,513	476
809	846	**William Carter** (Needham Heights, Mass.)	189,695	106,636	360	6,842	299	55,018	328
810	812	**Norlin Industries** (White Plains, N.Y.)	189,659¶	108,710	351	5,471**	336	58,586	315
811	760	**Michigan General** (Dallas)	188,887¶	111,862	343	919**	426	14,449	484
812	845	**Lane** (Altavista, Va.)	187,896	118,752	326	14,061	160	105,662	152
813	721	**Richmond Tank Car** (Houston)	187,412	184,112	183	5,805	326	94,599	171
814	•	**Kearney-National** (New York)	186,483	123,033	317	6,793	300	24,248	466
815	765	**Triangle Pacific** (Dallas)	186,240	113,225	336	5,356	340	63,352	286
816	866	**Houghton Mifflin** (Boston)	185,693	151,618	248	10,412	216	83,749	205
817	•	**Texas International** (Oklahoma City)	185,535¶	526,298	10	7,247	290	102,399	158
818	887	**Daniel Industries** (Houston)[3]	185,340	152,250	244	14,890	151	85,750	199
819	893	**Adobe Oil & Gas** (Midland, Tex.)	184,482	368,889	24	24,407	75	146,143	70
820	857	**Block Drug** (Jersey City, N.J.)[7]	184,032	161,449	226	18,358	123	113,607	128
821	830	**Tasty Baking** (Philadelphia)	183,861	61,237	481	(471)	445	26,567	458
822	•	**A.H. Belo** (Dallas)	182,245	143,443	272	20,245	104	124,631	103
823	•	**Pengo Industries** (Fort Worth, Tex.)[3]	182,163	250,350	89	15,810	141	112,922	130
824	914	**Papercraft** (Pittsburgh)	182,115	144,353	268	13,913	164	85,867	198
825	883	**Williamhouse-Regency** (New York)[16]	181,908	112,703	337	9,684	227	59,755	302
826	773	**Sun Electric** (Crystal Lake, Ill.)[13]	181,116	187,691	177	(4,278)	465	86,446	196
827	891	**Sullair** (Michigan City, Ind.)	180,996	136,550	290	1,034	425	69,679	265
828	863	**Angelica** (St. Louis)[10]	180,902	110,958	346	8,961	243	64,464	281
829	779	**Modine Manufacturing** (Racine, Wis.)[7]	180,770	128,029	308	7,445	286	78,162	227
830	854	**GenRad** (Concord, Mass.)	180,755	156,294	236	(1,772)	452	73,460	248
831	•	**Petro-Lewis** (Denver)[16]	180,050	560,765	9	33,884	31	127,635	96
832	829	**Ranco** (Columbus, Ohio)[3]	179,466	128,899	305	1,942	406	54,033	335
833	882	**Telex** (Tulsa, Okla.)[7]	178,466	151,820	246	8,083	271	49,822	360
834	869	**Coleco Industries** (Hartford, Conn.)	178,031	99,395	380	7,711	279	47,467	374
835	821	**Hayes-Albion** (Jackson, Mich.)[4]	177,245	115,117	334	(4,013)	464	58,046	318
836	877	**George Banta** (Menasha, Wis.)	177,082	93,466	397	8,153	268	51,399	350
837	777	**American Biltrite** (Cambridge, Mass.)	176,879¶	79,484	447	(441)	443	40,589	403
838	803	**Bohemia** (Eugene, Ore.)[6]	176,805	240,516	98	6,685	303	106,368	149
839	853	**GF Business Equipment** (Youngstown, Ohio)	176,628	85,138	432	794	431	42,603	393
840	851	**Midland Glass** (Cliffwood, N.J.)[3]	176,599	105,993	364	(2,314)	455	37,791	413
841	927	**Camco** (Houston)	176,080	127,618	309	15,590	144	61,240	298
842	909	**Standard-Coosa-Thatcher** (Chattanooga, Tenn.)[3]	175,470	76,379	455	1,493	415	37,346	415
843	874	**Anta** (Oklahoma City)[16]	174,858	133,600	295	8,669	253	74,659	243
844	860	**Polychrome** (Yonkers, N.Y.)[24]	174,608	126,646	310	5,952**	325	45,765	383
845	834	**Clow** (Oak Brook, Ill.)	174,483	110,492	347	(4,872)	468	40,968	399
846	919	**Federal Signal** (Oak Brook, Ill.)	173,926	122,587	319	11,770	197	75,554	240
847	881	**Augat** (Mansfield, Mass.)	173,909	166,474	212	20,098	108	102,678	157
848	886	**Franklin Electric** (Bluffton, Ind.)	173,736	98,162	385	7,059	295	52,504	343
849	908	**Energy Reserves Group** (Wichita)	173,599	357,047	25	(22,606)	489	91,489	178
850	806	**Bulova Watch** (New York)[25]	173,347	155,697	239	(3,677)	462	39,623	407

•Indicates that a corporation was not among the 500 or the Second 500 in 1980.

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

†Average for the year; see the reference to "employees" on page 200.

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200.

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200.

[24]Wholly owned by Dainippon Ink & Chemicals.

[25]Owned by Loews 94%.

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF SALES %	SALES RANK	NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY %	EQUITY RANK	EARNINGS PER SHARE '81($)	'80($)	'71($)	GROWTH RATE 1971-81 %	GROWTH RATE 1971-81 RANK	TOTAL RETURN TO INVESTORS 1981 %	1981 RANK	1971-81 AVERAGE %	1971-81 AVERAGE RANK	INDUSTRY CODE
2,075	358	6.9	134	18.1	135	2.99	2.43	N.A.	—		7.83	195	—		32
3,300	200	3.0	314	23.1	49	0.61	0.53	(0.66)‡	—		100.00	13	—		36
5,836	45	5.2	200	19.4	106	2.23	1.70	N.A.	—		34.64	86	—		23
1,645	418	11.6	41	31.3	13	2.01	1.11	N.A.	—		(44.06)	431	—		45
3,937	143	0.7	420	2.6	420	0.44	0.39	0.14**	12.13	188	(20.48)	327	0.99	294	38
3,600†	174	4.8	225	14.7	220	2.53	2.13	1.28‡	7.05	250	10.49	180	3.53	263	23
2,725	253	5.0	215	13.1	256	2.19	1.55‡	(0.21)	—		23.52	121	—		26
500	488	1.2	398	10.5	317	1.02	1.01	N.A.	—		(35.22)	394	—		20
6,300	34	3.6	286	12.4	269	12.22	10.80	3.73	12.60	182	—		—		23
2,284	326	2.9	320	9.3	334	N.A.	N.A.	N.A.	—		—		—		47
2,900	233	0.5	423	6.4	380	0.15**	(3.47)	0.31	(7.00)	318	(34.65)	392	(6.97)	365	34
5,200	68	7.5	121	13.3	253	6.21	5.65	2.07	11.61	194	44.25	58	1.37	289	25
1,616	421	3.1	308	6.1	384	0.57	3.23	N.A.	—		(43.20)	429	—		37
2,300	322	3.6	282	28.0	16	1.81	1.26	0.02‡	56.92	2	60.00	31	14.80	114	36
2,600	277	2.9	321	8.5	349	1.33	0.74	0.93	3.64	286	0.74	231	6.36	226	26
1,712	410	5.6	185	12.4	270	3.55	3.33	1.22	11.27	200	(10.34)	279	5.05	241	27
1,060	463	3.9	264	7.1	373	0.37	0.41	0.39**	(0.53)	301	100.89	12	30.74	12	10
2,550	282	8.0	105	17.4	150	1.81	1.36	0.17	26.68	35	(15.19)	300	28.58	15	38
480	489	13.2	26	16.7	159	1.51	1.47	0.19	23.03	54	(24.82)	349	—		10
2,040	364	10.0	62	16.2	183	2.48	2.23	0.80	11.98	191	17.22	144	2.80	272	43
2,100	347	—		—		(0.17)	0.54	1.18	—		(14.03)	295	1.17	290	20
2,047	363	11.1	49	16.2	176	2.45	2.34	N.A.	—		—		—		27
3,700	164	8.7	88	14.0	237	2.10	0.62	N.A.	—		(37.96)	406	—		45
2,900†	230	7.6	115	16.2	180	3.01	2.52	1.13	10.29	214	49.01	50	5.13	237	26
3,772	161	5.3	196	16.2	179	2.48	2.20	0.61	15.06	142	16.96	145	6.16	227	26
3,381	192	—		—		(0.68)	2.02	0.38	—		(42.35)	423	6.57	224	38
1,700	414	0.6	421	1.5	429	0.11	1.21	0.14	(2.38)	309	(50.93)	444	—		45
5,700	56	5.0	217	13.9	241	1.45	1.14	0.63	8.69	230	91.34	18	7.62	212	23
2,700	259	4.1	252	9.5	332	2.57	3.64	1.11	8.76	229	10.00	183	13.92	127	40
2,699	264	—		—		(0.23)	1.39	N.A.	—		(41.83)	421	—		38
1,651	417	18.8	5	26.5	24	1.50	0.99	(0.13)	—		(35.40)	397	33.29	8	10
5,600	58	1.1	402	3.6	416	0.55	1.11	1.02	(5.99)	317	11.41	176	5.69	233	38
3,902	145	4.5	235	16.2	177	0.64	0.08	0.53	1.90	294	33.20	91	(5.95)	357	44
2,604†	273	4.3	244	16.2	175	1.01	2.33	0.55	6.27	261	(12.73)	289	(10.75)	372	47
2,900	232	—		—		(1.05)	(0.77)	0.78	—		(21.73)	331	(3.07)	333	40
1,952	377	4.6	232	15.9	190	3.10	3.06	0.88	13.42	168	(10.78)	280	8.80	195	27
1,800	395	—		—		(0.17)	(4.78)	0.74	—		19.57	133	3.46	266	30
2,000	370	3.8	272	6.3	381	1.81	5.70	0.36**	17.53	109	(33.09)	386	7.52	214	26
3,144	210	.04	424	1.9	427	0.30	0.80	0.15	7.18	248	5.72	206	(5.05)	352	25
2,079†	355	—		—		(0.74)	0.79	0.83	—		(27.89)	366	—		32
2,475	299	8.9	82	25.5	31	2.16	0.94	0.40	18.37	100	4.83	215	15.41	105	45
3,400	190	0.9	416	4.0	409	2.82	3.68	2.22	2.42	291	34.43	89	14.21	123	22
3,601	173	5.0	216	11.6	290	2.03	1.77	N.A.	—		14.94	157	—		34
1,955	376	3.4	298	13.0	259	N.A.	N.A.	N.A.	—		—		—		27
2,047	362	—		—		(1.69)	(1.73)	1.45	—		(18.07)	314	(8.09)	367	34
2,414	308	6.8	142	15.6	199	1.62	1.50	0.17‡	25.29	43	14.06	166	22.15	46	36
3,200	206	11.6	43	19.6	99	1.45	1.36	0.20	21.91	63	(5.88)	257	15.86	94	36
3,370†	193	4.1	257	13.4	251	1.90	0.60	0.55	13.20	171	36.80	76	9.15	190	36
590	483	—		—		(0.46)	0.29	N.A.	—		(44.44)	432	16.72	81	10
3,150	208	—		—		(0.91)	(2.22)	1.69	—		—		—		38

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
851	900	**Essex Chemical** (Clifton, N.J.)	172,772	107,343	358	8,152	270	34,467	428
852	921	**Sta-Rite Industries** (Milwaukee)	172,599	103,525	371	5,964	324	37,054	419
853	800	**Continental Copper & Steel Industries** (Cranford, N.J.)[16]	172,223	96,362	389	6,729	301	48,356	368
854	873	**Conwood** (Memphis)	171,870	105,976	365	18,273	125	84,524	203
855	628	**Illini Beef Packers** (Geneseo, Ill.)[7,26]	171,764¶	20,249	500	1,441	416	11,681	490
856	895	**Bundy** (Warren, Mich.)[4]	171,732	125,615	314	7,469	285	65,087	277
857	875	**Cronus Industries** (Dallas)	171,292	77,615	452	3,331	378	20,433	479
858	911	**West** (Phoenixville, Pa.)	170,805	120,631	323	13,815	166	75,902	237
859	947	**Newell Companies** (Freeport, Ill.)	170,389	99,016	382	9,604	229	51,064	353
860	855	**Harper & Row** (New York)[6]	170,232	137,189	288	5,794	327	62,523	291
861	922	**R.P. Scherer** (Troy, Mich.)[7]	169,997	146,550	256	8,538	258	78,249	226
862	905	**J.M. Smucker** (Orrville, Ohio)[6]	169,442	73,331	461	7,705	280	50,256	359
863	940	**Pall** (Glen Cove, N.Y.)[4]	169,081	182,439	186	24,799	73	91,312	179
864	•	**Farah Manufacturing** (El Paso, Tex.)[13]	168,842	104,094	369	10,964	209	29,686	448
865	811	**Applied Power** (Brookfield, Wis.)[14]	168,706	89,884	418	5,161	346	38,288	412
866	•	**Tacoma Boatbuilding** (Tacoma, Wash.)	168,639	109,648	349	6,592	307	25,197	462
867	916	**Aegis** (Coral Gables, Fla.)	168,367	80,778	440	4,549	359	34,895	426
868	819	**Keller Industries** (Miami)[4]	167,250	101,935	375	4,849	351	60,414	301
869	•	**CMI** (Oklahoma City)	167,239	174,068	201	4,550	358	59,191	306
870	943	**Wallace Business Forms** (Hillside, Ill.)[4,27]	166,158	100,167	379	12,810	184	68,971	267
871	833	**Inspiration Consolidated Copper** (Phoenix)	165,438	222,501	124	(24,162)	491	78,529	225
872	897	**Gulton Industries** (Princeton, N.J.)[12]	164,188	82,873	438	1,658	412	40,622	402
873	784	**Criton** (Bellevue, Wash.)[10]	163,707¶	88,381	423	18,936	120	54,242	333
874	932	**Beverage Management** (Columbus, Ohio)[7]	163,244	71,653	463	6,079	320	39,354	408
875	•	**Sabine** (Dallas)	163,143	347,201	30	28,342	55	183,077	33
876	930	**Helene Curtis Industries** (Chicago)[12]	163,097	84,016	436	4,535	360	35,581	422
877	912	**Automatic Switch** (Florham Park, N.J.)	161,531	135,057	292	20,231	105	116,490	121
878	888	**Core Industries** (Bloomfield Hills, Mich.)[14]	160,953	108,590	352	13,710	169	76,448	234
879	959	**Binks Manufacturing** (Franklin Park, Ill.)[17]	160,591	89,657	419	7,045	296	59,275	305
880	920	**Baldor Electric** (Fort Smith, Ark.)	160,162	102,276	373	11,733	199	63,470	285
881	865	**Teradyne** (Boston)	159,942	165,736	215	4,267	362	90,541	181
882	948	**Soundesign** (Jersey City, N.J.)	159,684	79,773	446	3,075	381	33,645	434
883	852	**Farmer Bros.** (Torrance, Calif.)[16]	159,611	72,839	462	13,034	181	59,123	308
884	907	**Nordson** (Amherst, Ohio)[13]	159,178	106,740	359	9,788	224	67,613	271
885	•	**Intermedics** (Freeport, Tex.)[13]	158,767	132,030	301	16,636	134	84,970	200
886	994	**Standard Motor Products** (Long Island City, N.Y.)	157,081	110,060	348	11,258	204	55,979	324
887	950	**Fedders** (Edison, N.J.)[13]	156,779	146,851	257	(5,392)	471	19,793	480
888	935	**Coca-Cola Bottling Co. of Miami** (Coral Gables, Fla.)	156,460	96,601	388	6,911	298	30,403	445
889	961	**Analog Devices** (Norwood, Mass.)[13]	156,236	144,901	267	4,589	356	71,070	259
890	970	**Woodward Governor** (Rockford, Ill.)[3]	155,687	108,200	354	12,442	189	77,325	229
891	879	**La-Z-Boy Chair** (Monroe, Mich.)[6]	155,617	119,140	325	9,632	228	83,482	207
892	•	**MCO Holdings** (Los Angeles)	155,492	351,875	28	19,112	114	52,707	341
893	963	**Moog** (East Aurora, N.Y.)[3]	155,140	174,289	200	10,245	218	74,167	245
894	901	**Pirelli Cable** (Union, N.J.)	154,662	102,825	372	(6,033)	472	52,691	342
895	928	**Texfi Industries** (Greensboro, N.C.)[13]	154,564	80,183	443	317	436	15,915	483
896	899	**Warner Electric Brake & Clutch** (South Beloit, Ill.)	154,289	99,131	381	9,339	236	63,062	289
897	956	**Elixir Industries** (Gardena, Calif.)[14]	154,175	70,749	465	2,255	400	40,900	400
898	624	**Continental Steel** (Kokomo, Ind.)[28]	153,912	126,283	311	(17,080)	486	13,156	487
899	•	**AFG Industries** (Kingsport, Tenn.)	153,660	178,618	191	8,630	255	32,273	436
900	926	**Dynamics Corp. of America** (Greenwich, Conn.)	152,580	98,963	383	5,693	330	55,769	325

•Indicates that a corporation was not among the 500 or the Second 500 in 1980

†Average for the year; see the reference to "employees" on page 200

‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 200

[26]Name changed to Imark Industries October 31, 1981.

[27]Name changed to Wallace Computer Services November 4, 1981.

[28]Name changed from Penn-Dixie Industries March 15, 1982.

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF SALES %	SALES RANK	NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY %	STOCKHOLDERS' EQUITY RANK	EARNINGS PER SHARE '81($)	'80($)	'71($)	GROWTH RATE 1971-81 %	GROWTH RATE 1971-81 RANK	TOTAL RETURN TO INVESTORS 1981 %	1981 RANK	1971-81 AVERAGE %	1971-81 AVERAGE RANK	INDUSTRY CODE
950	465	4.7	228	23.7	46	2.81	1.90	(0.02)‡	—		34.47	88	22.99	37	28
2,078	356	3.5	294	16.1	184	1.83	(0.21)	0.79	8.76	228	26.94	111	8.33	201	45
2,000†	367	3.9	263	13.9	240	1.73	1.15	(0.04)	—		(21.44)	330	3.59	261	33
1,552	425	10.6	53	21.6	67	3.26	2.84	0.80	15.08	141	7.50	196	18.22	66	21
200	497	0.8	417	12.3	274	1.67	0.00	N.A.	—		(4.62)	248	—		20
2,952	225	4.3	241	11.5	295	1.93	0.06	1.34	3.72	285	4.45	217	0.97	296	34
1,798	399	1.9	363	16.3	173	1.41	0.40	N.A.	—		22.73	126	—		34
3,500	184	8.1	102	18.2	130	1.77	1.28	0.33	18.29	102	78.34	22	14.67	116	30
3,150	209	5.6	180	18.8	114	3.00	2.52	1.33	8.47	232	28.97	104	—		25
1,900	383	3.4	299	9.3	336	1.89	1.44	0.73	9.98	216	26.70	114	5.12	238	27
1,966	373	5.0	213	10.9	307	1.11	0.67	0.43	9.95	217	(11.74)	285	(3.62)	340	28
1,211	452	4.5	234	15.3	207	4.08	3.35	1.46	10.82	209	18.96	135	8.57	198	20
3,200	207	14.7	15	27.2	19	1.86	1.42	(0.00)‡	—		(18.95)	319	39.01	2	45
6,000	41	6.5	147	36.9	7	1.74	0.91	1.07	4.98	275	36.28	80	(9.05)	369	23
2,100	345	3.1	310	13.5	250	2.85	0.39	0.48	19.50	86	—		—		45
2,575	279	3.9	282	26.2	27	2.65	2.57	N.A.	—		(2.51)	244	—		37
2,100	350	2.7	329	13.0	258	0.42	0.18	(0.73)‡	—		32.98	93	3.63	259	30
3,658†	167	2.9	317	8.0	354	1.40	0.30	1.24	1.22	295	18.92	136	(4.52)	347	34
2,082	353	2.7	328	7.7	360	0.73	0.50	0.36	7.33	246	73.94	23	3.63	260	45
1,799	398	7.7	114	18.6	118	2.88	2.45	0.60	16.98	113	35.75	84	13.87	128	27
2,181	334	—		—		(7.38)	(5.38)	3.63	—		—		—		10
3,550	178	1.0	406	4.1	407	0.51	1.95	(2.04)‡	—		(42.69)	425	3.47	265	36
2,521	288	11.6	42	34.9	10	5.44	3.49	(2.50)	—		(31.46)	380	25.31	24	41
2,106	339	3.7	275	15.4	203	1.51	1.11	N.A.	—		16.22	152	—		49
408	490	17.4	7	15.5	202	1.94	1.74	0.56	13.23	170	(40.50)	418	22.67	38	10
1,900	384	2.8	325	12.7	265	2.34	1.22	0.76	11.90	192	12.89	174	5.34	236	43
2,443	307	12.5	31	17.4	149	2.44	2.26	0.51	16.95	114	6.32	203	10.72	164	34
2,400	310	8.5	92	17.9	139	1.38	1.39	0.31	16.11	125	4.41	219	19.26	61	34
1,500	430	4.4	239	11.9	285	2.30	2.53	0.83	10.73	210	(16.80)	310	13.53	132	45
2,550	283	7.3	126	18.5	122	1.84	1.50	0.17	26.89	33	32.72	95	—		36
3,050	218	2.7	334	4.7	398	1.00	2.75	(0.47)	—		(27.66)	364	9.03	193	38
600	482	1.9	364	9.1	338	1.37	0.40	0.72	6.64	257	137.84	5	7.90	209	36
1,085	460	8.2	99	22.0	58	6.77	4.29	1.08	20.15	80	(7.33)	266	17.17	77	20
2,498	296	6.1	159	14.5	227	1.85	2.60	N.A.	—		(45.77)	433	—		45
2,100	351	10.5	55	19.6	98	1.76	1.26	N.A.	—		25.02	117	—		38
2,400	314	7.2	130	20.1	85	2.48	0.74	0.65	14.33	153	99.23	14	8.15	205	40
2,480	298	—		—		(0.66)	(2.79)	1.70	—		(35.29)	396	(19.29)	381	45
1,443	434	4.4	238	22.7	51	4.35	3.15	6.04	(3.23)	312	34.07	90	9.11	192	49
2,735	247	2.9	316	6.5	378	0.50	1.12	0.13	14.42	150	(37.94)	405	26.00	22	36
2,529	287	8.0	107	16.1	185	16.48	12.82	3.03	18.45	98	—		—		38
3,449	186	6.2	157	11.5	294	2.10	2.14	1.16	6.11	262	29.84	101	—		25
371	491	12.3	35	36.3	9	1.57	0.61	0.99	4.72	278	1.74	227	(5.21)	353	10
2,924	227	6.6	144	13.8	243	1.29	1.09	0.24	18.31	101	(26.22)	358	22.54	41	41
1,260	447	—		—		N.A.	N.A.	N.A.	—		—		—		33
1,730	406	0.2	435	2.0	426	0.09	(6.24)	3.37	(30.39)	333	23.08	124	(18.65)	379	22
2,728	251	6.1	165	14.8	217	1.79	2.01	0.28	20.38	78	9.28	186	22.46	43	36
1,870	387	1.5	376	5.5	391	0.50	(0.55)	0.61	(1.97)	306	70.00	26	(6.79)	360	34
1,821†	392	—		—		(3.24)	(4.81)	0.53	—		(47.66)	439	(14.82)	375	33
1,743	403	5.6	183	26.7	22	1.48	0.58	0.76	6.89	252	166.67	3	3.44	267	32
2,187	333	3.7	274	10.2	320	1.26	2.28	(1.27)‡	—		(15.92)	304	(0.43)	312	36

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
901	957	**Valspar** (Minneapolis)[13]	152,540	66,345	472	7,654**	281	36,171	421
902	985	**Garan** (New York)[7]	152,397	90,421	416	9,476	232	52,085	346
903	889	**Dyneer** (Westport, Conn.)[4]	151,564	100,495	377	7,250	289	51,013	354
904	958	**Genesee Brewing** (Rochester, N.Y.)[6]	151,258*	75,081	459	8,310	263	49,681	361
905	872	**Crompton** (New York)[3]	151,081	116,868	330	(885)	446	58,820	313
906	•	**Vulcan** (Latrobe, Pa.)	150,640	91,416	408	4,810	352	41,467	397
907	991	**Great Lakes Chemical** (West Lafayette, Ind.)	150,333	170,198	207	18,031	126	108,878	141
908	923	**Hexcel** (San Francisco)	150,144	105,320	366	1,228	421	49,291	364
909	910	**Pantasote** (Greenwich, Conn.)	149,774	80,885	439	366**	435	32,029	439
910	944	**General Binding** (Northbrook, Ill.)	149,620	108,079	355	7,524	284	63,103	288
911	810	**Instrument Systems** (Jericho, N.Y.)[3]	149,305¶	92,288	402	(11,407)	482	13,772	486
912	•	**Pratt & Lambert** (Buffalo, N.Y.)	148,953	67,243	470	4,705**	355	34,078	430
913	972	**Lee Enterprises** (Davenport, Iowa)[3]	148,844	172,514	205	19,074	115	101,327	161
914	982	**Keystone International** (Houston)	148,575	144,156	269	20,499	102	80,708	217
915	772	**Joslyn Mfg. & Supply** (Chicago)	148,432	152,300	243	15,867	140	99,626	165
916	•	**MacAndrews & Forbes Group** (New York)	148,367	75,287	458	5,671	332	21,609	475
917	890	**RSR** (Dallas)	148,294	55,008	475	2,936	386	27,568	455
918	•	**Steiger Tractor** (Fargo, N.D.)[3]	148,272	79,033	450	6,184	316	37,275	418
919	934	**Medalist Industries** (Mequon, Wis.)	148,077	86,189	430	(1,951)	454	30,796	443
920	952	**Scholastic** (New York)[14]	147,352	91,274	411	1,759	410	33,886	432
921	913	**Iroquois Brands** (Greenwich, Conn.)	147,070	91,371	409	(3,385)**	460	27,371	456
922	997	**Bob Evans Farms** (Columbus, Ohio)[6]	146,983	63,752	477	11,793	196	53,886	337
923	•	**De Tomaso Industries** (Red Bank, N.J.)	146,033	165,399	218	(10,619)	481	(4,425)	496
924	971	**Hazeltine** (Commack, N.Y.)	145,514	92,282	403	1,865	408	45,450	384
925	942	**Duriron** (Dayton, Ohio)	145,314	103,829	370	10,018	222	67,045	274
926	•	**Barry Wright** (Newton, Mass.)	144,903	92,268	404	12,769	185	69,044	266
927	933	**Medford** (Medford, Ore.)	144,678	85,143	431	2,930	387	54,651	330
928	•	**Hansburg** (Indianapolis)[17]	144,570	147,429	255	13,777	168	102,061	159
929	•	**Galaxy Carpet Mills** (Elk Grove Village, Ill.)[3]	144,442	65,844	474	5,786	328	26,392	459
930	•	**Great American Industries** (Binghamton, N.Y.)	144,275	80,654	441	6,184	317	35,314	424
931	917	**Conrac** (Stamford, Conn.)	144,238¶	96,196	391	3,251	379	42,321	395
932	878	**Robintech** (Fort Worth, Tex.)[16]	143,388	90,951	413	(1,925)	453	27,884	453
933	•	**John H. Harland** (Decatur, Ga.)	143,242	76,161	457	13,929	163	63,296	287
934	•	**Winnebago Industries** (Forest City, Iowa)[14]	143,049	93,430	398	8,676**	252	70,875	260
935	•	**Molex** (Lisle, Ill.)[16]	143,014	116,224	332	15,990	139	80,059	219
936	973	**American Welding & Manufacturing** (Warren, Ohio)[17]	142,480	66,447	471	13,452	174	45,310	385
937	876	**Ideal Toy** (Hollis, N.Y.)[10]	141,397	94,161	394	(15,452)	485	25,346	461
938	969	**Facet Enterprises** (Tulsa)[3]	141,216	93,176	399	1,685**	411	46,381	380
939	990	**R.G. Barry** (Pickerington, Ohio)	141,080	68,133	469	1,284	419	30,622	444
940	924	**Everest & Jennings International** (Los Angeles)	141,052	106,299	362	4,245	363	68,692	269
941	981	**Roblin Industries** (Buffalo, N.Y.)	140,855¶	80,034	444	(5,359)	469	12,126	489
942	•	**Chase Bag** (Greenwich, Conn.)	140,315	56,697	490	3,076	380	33,342	435
943	953	**Courier** (Lowell, Mass.)[3]	140,078	79,021	448	1,278	420	35,353	423
944	•	**Tom Brown** (Midland, Tex.)[7]	139,621	209,629	143	21,096	97	105,540	153
945	986	**John Fluke Manufacturing** (Everett, Wash.)[3]	139,580	128,783	306	8,478	259	64,874	279
946	•	**Forest Oil** (Denver)	139,004	493,008	13	5,104	348	89,715	186
947	983	**Monarch Machine Tool** (Sidney, Ohio)	138,770	91,303	410	19,013	117	70,163	262
948	945	**Simmonds Precision Products** (Tarrytown, N.Y.)	138,572	90,803	415	9,724	226	52,370	344
949	•	**International Controls** (Boca Raton, Fla.)	137,502	84,366	435	7,833	277	38,528	411
950	•	**Kuhlman** (Troy, Mich.)	137,339	63,343	478	3,651	371	32,112	438

•Indicates that a corporation was not among the 500 or the Second 500 in 1980

*Does not include excise taxes: see the explanation of "sales" on page 200

**Reflects an extraordinary credit of at least 10%: see the explanations of "net income" and "earnings per share" on page 200

†Average for the year: see the reference to "employees" on page 200

¶Reflects an extraordinary charge of at least 10%: see the explanations of "net income" and "earnings per share" on page 200

#Includes sales from discontinued operations of at least 10%: see explanation of "sales" on page 200

EMPLOYEES		NET INCOME AS PERCENT OF SALES		NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY		EARNINGS PER SHARE			GROWTH RATE 1971-81		TOTAL RETURN TO INVESTORS 1981		TOTAL RETURN TO INVESTORS 1971-81 AVERAGE		INDUSTRY
NUMBER	RANK	%	RANK	%	RANK	'81($)	'80($)	'71($)	%	RANK	%	RANK	%	RANK	CODE
1,286	446	5.0	214	21.2	70	2.85**	1.50	0.17	32.57	17	59.14	32	16.36	86	28
4,100	131	6.2	155	18.2	131	3.49	2.52	0.93	14.14	157	15.03	156	7.83	210	23
1,700	413	4.8	224	14.2	233	2.12	2.32	(0.19)‡	—		(34.24)	390	15.03	110	40
962	464	5.5	187	16.7	157	5.08	4.30	1.34	14.26	155	(24.53)	347	—		49
3,800	156	—		—		(0.69)	5.42	2.70	—		(32.13)	383	(0.45)	313	22
1,863	388	3.2	304	11.6	291	2.37	1.83	0.25	25.22	44	57.19	37	20.94	52	10
1,180	455	12.0	37	16.6	152	2.51	2.67	0.22	27.56	31	(9.44)	272	27.90	16	28
2,100	349	0.8	418	2.5	423	0.38	2.31	0.61	(4.62)	315	(47.01)	438	13.11	137	34
2,300	324	0.2	432	1.1	431	0.09**	0.38	(0.37)‡	—		14.25	164	4.22	252	30
2,725	254	5.0	212	11.9	282	1.50	1.65	0.50	11.61	196	(25.28)	355	(2.64)	328	44
2,000	368	—		—		(3.37)	(4.40)	2.10	—		(60.00)	452	(26.48)	383	34
1,500†	431	3.2	305	13.8	244	3.24**	2.38	1.51	7.93	237	4.22	221	9.35	187	28
4,000	139	12.8	28	18.8	113	2.70	2.79	0.52	17.91	106	30.07	100	17.21	74	27
1,547	426	13.8	18	25.4	32	1.74	1.50	0.15	27.77	30	(1.68)	242	34.61	7	34
2,000	369	10.7	51	15.9	188	4.48	3.55	0.93	17.03	112	104.83	8	19.94	58	36
647	479	3.8	270	26.2	26	3.77	0.85	(0.15)[29]	—		(0.98)	236	9.27	188	20
1,100	458	2.0	362	10.7	313	1.79	1.32	N.A.	—		(7.30)	264	—		33
794	473	4.2	249	16.6	151	1.85	1.91	N.A.	—		(37.29)	402	—		45
2,199	331	—		—		(1.09)	0.51	0.99	—		(29.07)	371	(3.31)	337	47
2,065†	361	1.2	396	5.2	394	1.02	1.60	1.22	(1.77)	305	(1.43)	239	(1.54)	323	27
1,240	450	—		—		(1.79)	1.34**	0.80‡	—		(24.84)	350	(4.84)	349	28
5,000	82	8.0	106	21.9	64	2.10	2.03	0.27	22.77	59	39.64	68	29.84	13	20
3,609	172	—		—		(5.16)	1.03	N.A.	—		—		—		40
2,741	246	1.3	390	4.1	406	0.91	2.37	(0.42)	—		(1.63)	241	13.18	136	36
2,356	318	6.9	137	14.9	215	1.45	1.43	0.31	16.68	118	(9.56)	273	22.55	39	45
2,160	336	8.8	84	18.5	121	1.55	1.32	0.12	29.16	24	(6.37)	259	27.71	17	34
1,444	433	2.0	361	5.4	392	1.18	0.78	0.54	8.13	235	(26.76)	360	—		26
1,723	409	9.5	69	13.5	249	1.80	1.89	0.41	15.94	127	(31.86)	382	15.36	106	45
1,425	435	4.0	259	21.9	61	2.43	0.83	0.62	14.64	146	42.11	63	—		22
2,657	266	4.3	248	17.5	148	3.87	4.08	(0.20)‡	—		4.87	214	9.96	177	30
1,785	400	2.3	351	7.7	361	1.34	2.05	0.93	3.72	284	56.44	38	8.07	207	36
1,420	436	—		—		(0.96)	(0.36)	0.30**	—		(39.61)	416	(5.81)	356	30
3,791	160	9.7	65	22.0	60	1.68	1.35	0.24	21.48	67	26.18	115	13.95	126	27
1,395	439	6.1	163	12.2	276	0.35**	(0.54)	0.19	6.30	259	36.36	78	(17.03)	376	40
2,379	316	11.2	48	20.0	90	2.44	2.28	N.A.	—		23.10	123	—		36
848	471	9.4	70	29.7	15	5.31	4.08	(0.04)	—		(28.87)	370	31.24	10	41
1,820†	393	—		—		(4.00)	0.97	0.89	—		86.70	19	(6.97)	364	47
2,455	304	1.2	397	3.6	414	0.60**	(2.31)‡	N.A.	—		(18.43)	317	—		40
3,700	165	0.9	413	4.2	405	0.33	0.62	0.37	(1.14)	303	(39.56)	415	(3.14)	334	31
2,700	260	3.0	312	6.2	383	0.55	1.38	0.27	7.37	244	(30.28)	375	14.48	120	38
1,588	423	—		—		(2.24)	(2.98)	0.38	—		(40.58)	420	(8.17)	368	33
2,411	309	2.2	355	9.2	337	11.07	7.45	N.A.	—		—		—		26
2,730	249	0.9	412	3.6	415	0.71	2.14	N.A.	—		(13.97)	294	—		27
1,200	454	15.1	13	20.0	88	0.57	0.14	N.A.	—		(46.07)	434	—		10
2,677	265	6.1	162	13.1	257	1.28	1.49	0.15	23.91	50	(18.34)	316	23.54	33	38
557	485	3.7	280	5.7	390	0.77	0.31	(0.40)	—		(30.15)	374	7.36	216	10
1,629	419	13.7	19	27.1	21	5.32	3.50	0.06	56.59	3	(16.02)	306	21.19	49	45
2,900	234	7.0	132	18.6	119	1.97	0.10	0.24	23.43	53	(14.37)	299	12.34	147	38
2,100	343	5.7	177	20.3	81	2.08	2.58	0.14‡	30.98	22	(22.85)	339	10.38	168	41
1,353	440	2.7	335	11.4	298	1.80	0.02	0.67**	10.39	213	45.82	54	12.56	144	36

**Figure is for Cohen-Hatfield

THE SECOND 500 LARGEST INDUSTRIALS

RANK '81	RANK '80	COMPANY	SALES ($000)	ASSETS ($000)	ASSETS RANK	NET INCOME ($000)	NET INCOME RANK	STOCKHOLDERS' EQUITY ($000)	STOCKHOLDERS' EQUITY RANK
951	•	**Intermark** (La Jolla, Calif.)[7]	136,955	102,129	374	5,316	341	26,201	460
952	960	**C.H. Masian & Sons** (Carlisle, Pa.)	136,529	59,370	486	253	439	29,909	446
953	995	**Vernitron** (Lake Success, N.Y.)	136,524	86,806	427	8,000	274	50,795	355
954	962	**Glenmore Distilleries** (Louisville, Ky.)[16]	136,336*	113,410	335	2,602	393	60,520	300
955	992	**Conrock** (Los Angeles)	135,828	91,480	406	6,116	319	72,770	249
956	965	**Publicker Industries** (Greenwich, Conn.)	135,816*	112,513	338	(23,978)	490	49,426	362
957	968	**Spectra-Physics** (San Jose, Calif.)[3]	135,740	140,717	279	2,518	394	64,416	282
958	•	**Paradyne** (Largo, Fla.)	135,413	175,519	198	17,508	129	117,745	118
959	976	**TMC Industries** (Rome, Ga.)[7]	135,335	76,346	456	(8,019)	478	(7,259)	498
960	•	**Webb** (St. Paul, Minn.)	134,825	84,447	434	5,530	334	37,606	414
961	•	**APL** (Great Neck, N.Y.)[16]	134,805	116,556	331	(6,347)	474	38,590	409
962	•	**General Steel Industries** (St. Louis)	134,773	91,467	407	8,277**	264	40,363	404
963	939	**AVX** (Great Neck, N.Y.)	134,214	149,702	252	(2,833)	458	63,945	284
964	•	**Dellwood Foods** (Yonkers, N.Y.)	134,091	32,808	499	2,195	401	18,444	481
965	•	**Bacardi** (San Juan, Puerto Rico)	133,857*	200,517	159	36,745	22	141,203	81
966	993	**Compo Industries** (Waltham, Mass.)[3]	133,736	63,224	479	3,534	373	23,477	468
967	987	**National Mine Service** (Pittsburgh)[16]	133,464	120,998	321	1,159	423	55,515	326
968	977	**Dayton Malleable** (Kettering, Ohio)[14]	133,363	73,490	460	1,792	409	48,324	369
969	966	**Tokheim** (Fort Wayne, Ind.)[17]	132,907	86,773	428	8,663	254	48,193	372
970	•	**Tomlinson Oil** (Wichita)[14]	132,796	51,750	492	(5,387)	470	10,792	493
971	•	**Sparton** (Jackson, Mich.)[16]	132,633	60,940	482	7,301	287	37,495	415
972	904	**International Rectifier** (Los Angeles)[16]	132,617	125,783	312	3,432	375	46,069	382
973	978	**Watkins-Johnson** (Palo Alto, Calif.)	132,426	116,127	333	6,682	305	71,160	257
974	980	**Cadence Industries** (West Caldwell, N.J.)	132,326	91,203	412	(3,061)**	459	28,726	451
975	•	**Mor-Flo Industries** (Cleveland)	132,147	83,938	437	1,879	407	16,622	482
976	•	**Kysor Industrial** (Cadillac, Mich.)	131,900	91,515	405	2,905	388	37,457	416
977	•	**Thomaston Mills** (Thomaston, Ga.)[16]	131,707	71,248	464	2,000	404	47,339	375
978	915	**Mirro** (Manitowoc, Wis.)	131,589	84,581	433	(1,158)	447	44,852	386
979	•	**Recognition Equipment** (Irving, Tex.)[13]	131,468	130,007	303	(8,167)	479	52,792	340
980	975	**Munsingwear** (Minneapolis)	131,168	77,306	453	(6,251)	473	40,246	405
981	954	**Swank** (Attleboro, Mass.)	131,068	79,857	445	4,728	354	59,275	304
982	•	**Coca-Cola Bottling Co. Consolidated** (Charlotte, N.C.)	129,902	60,409	484	7,568	283	41,210	398
983	•	**Gr co** (Minneapolis)	129,715	89,460	420	7,284	288	58,991	309
984	941	**Combustion Equipment Associates** (New York)[7]	129,644*	64,631	476	(129,944)	493	(83,783)	499
985	•	**Intercraft Industries** (Chicago)	12[illegible],520	76,445	454	1,625	414	32,148	437
986	967	**Mount Vernon Mills** (Greenville, S.C.)	129,202	70,007	466	4,921	350	55,076	327
987	•	**Keuffel & Esser** (Morristown, N.J.)	129,045	86,380	429	5,125	347	46,105	381
988	•	**Safeguard Business Systems** (Fort Washington, Pa.)	128,010	59,125	487	8,753	249	23,952	467
989	•	**TRE** (Beverly Hills, Calif.)[4]	127,642	124,469	316	17,683	127	89,665	187
990	•	**Church & Dwight** (Piscataway, N.J.)	127,105	95,128	392	6,471	313	51,268	352
991	•	**Chatham Manufacturing** (Elkin, N.C.)	125,133	59,820	485	1,633	413	47,226	378
992	•	**General Automation** (Anaheim, Calif.)[4]	124,891	78,202	449	123**	442	23,390	470
993	•	**J.L. Clark Manufacturing** (Rockford, Ill.)[17]	124,466	107,448	357	13,151	177	59,344	303
994	938	**Walco National** (New York)[16]	124,394	128,606	307	14,220	205	61,790	295
995	•	**Goody Products** (Kearny, N.J.)	123,943	68,262	468	6,573	308	42,668	392
996	•	**Checker Motors** (Kalamazoo, Mich.)	123,146	60,555	483	(448)	444	31,891	440
997	•	**Trico Industries** (Gardena, Calif.)	123,047	94,128	395	11,185	206	50,258	358
998	•	**Sigma-Aldrich** (St. Louis)	123,009	104,466	368	16,284	137	82,053	212
999	•	**Instrumentation Laboratory** (Lexington, Mass.)[7]	122,534	97,140	386	5,271	342	33,849	433
1,000	•	**L.S. Starrett** (Athol, Mass.)[16]	122,451	94,866	393	13,791	167	72,167	251
		TOTALS	**120,938,347**	**90,718,567**		**5,737,617**		**43,904,770**	

•Indicates that a corporation was not among the 500 or the Second 500 in 1980

*Does not include excise taxes; see the explanation of "sales" on page 200

**Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 200

†Average for the year; see the reference to "employees" on page 200

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF STOCKHOLDERS' EQUITY: SALES %	SALES RANK	EQUITY %	EQUITY RANK	EARNINGS PER SHARE '81($)	'80($)	'71($)	GROWTH RATE 1971-81 %	GROWTH RATE 1971-81 RANK	TOTAL RETURN TO INVESTORS 1981 %	1981 RANK	1971-81 AVERAGE %	1971-81 AVERAGE RANK	INDUSTRY CODE
1,987	372	3.9	266	20.3	82	1.87	2.87	(1.46)‡	—		(52.80)	447	—		36
1,527	427	0.2	436	0.8	434	0.17	(2.15)	0.75	(13.79)	327	17.44	142	(6.55)	359	22
2,900	236	5.9	172	15.7	193	1.35	1.34	0.23**	19.36	87	(38.91)	411	11.33	159	36
863	469	1.9	365	4.3	402	1.42	3.56	(0.18)	—		(21.91)	332	12.03	151	49
1,094	459	4.5	236	8.4	350	1.53	2.34	0.90	5.45	268	6.90	200	13.22	135	10
800	472	—		—		(2.88)	0.09	0.04	—		(55.80)	449	(3.05)	331	28
2,104	340	1.9	366	3.9	412	0.55	2.21	0.24**	8.65	231	(60.47)	453	15.47	104	38
2,638	271	12.9	27	14.9	216	1.36	0.74	N.A.	—		30.82	99	—		44
1,959	375	—		—		(6.85)	(2.08)**	N.A.	—		—		—		22
1,500	432	4.1	254	14.7	222	2.44	2.24	0.72	12.98	177	5.04	212	14.67	117	27
1,729	407	—		—		(2.05)	0.61	0.79	—		(42.38)	424	(4.57)	348	26
1,526	428	6.1	160	20.5	77	2.13**	1.45**	(2.38)	—		155.98	4	14.01	125	28
4,630	97	—		—		(0.60)	1.76	N.A.	—		(53.44)	448	—		36
655	477	1.6	372	11.9	283	3.70	4.29**	0.47	22.92	56	(12.06)	286	6.06	229	20
765†	474	27.5	3	26.0	28	3.68	3.36	1.09	12.94	179	—		—		49
1,150	456	2.6	336	15.1	214	1.05	(0.26)	0.11‡	25.31	42	112.46	7	10.03	175	28
1,872	386	0.9	415	2.1	425	0.24	0.50	0.68	(9.89)	32[illegible]	(23.93)	345	8.96	194	45
2,100†	342	1.3	387	3.7	413	0.91	(2.78)	1.13	(2.14)	307	15.10	155	9.83	181	33
1,940	380	6.5	145	18.0	137	1.98	2.04	0.36	18.59	97	(40.04)	417	16.25	89	45
124	499	—		—		(1.36)	0.66	0.05	—		(67.87)	457	—		29
2,500	292	5.5	186	19.5	103	2.14	0.68	0.18	28.09	29	21.27	128	19.70	59	36
1,944	379	2.6	341	7.4	366	1.23	2.01‡	(0.98)	—		(32.31)	385	5.10	239	36
2,540	284	5.0	210	9.4	333	2.10	2.23	1.09	6.78	255	(26.31)	359	(0.39)	310	36
2,500	291	—		—		(2.22)**	1.66**	(0.24)‡	—		(10.14)	277	6.87	221	27
1,410	437	1.4	380	11.3	301	0.92	0.70	0.44	7.65	240	(25.20)	354	1.68	283	36
1,948	378	2.2	354	7.8	359	1.04	1.19	0.58	6.01	263	(1.14)	238	8.37	200	40
3,344	195	1.5	374	4.2	404	2.18	2.25	(0.24)	—		—		—		22
1,858	389	—		—		(0.49)	1.49	1.51	—		(8.06)	267	2.06	276	34
2,200	330	—		—		(1.34)	0.90	(0.09)‡	—		(56.89)	450	(6.43)	358	44
3,906	144	—		—		(3.41)	(2.90)	2.86	—		(22.38)	337	(1.50)	322	23
3,100	215	3.6	284	8.0	357	1.40	2.25	0.83	5.37	269	(6.80)	260	8.13	206	31
1,781	401	5.8	175	18.4	127	3.02	2.20	0.99	11.80	193	59.13	33	—		49
1,738	404	5.6	184	12.3	273	2.08	1.54	0.71	11.35	198	42.40	62	5.98	231	45
1,900	385	—		—		(12.52)	(2.55)	0.14	—		(70.88)	458	(21.22)	382	34
2,500	294	1.3	392	5.1	395	1.21	3.01	1.35	(1.09)	302	—		—		26
2,600	275	3.8	271	8.9	341	5.98	6.47	0.37	32.08	19	33.00	92	17.72	69	22
1,960	374	4.0	260	11.1	305	2.98	2.30	0.46	20.54	76	73.35	24	15.73	97	38
1,800	397	6.8	139	36.5	8	1.17	1.02	N.A.	—		(23.69)	344	—		27
2,400	311	13.9	17	19.7	95	2.82	3.06	0.60	16.74	117	(50.16)	443	0.41	303	41
559	484	5.1	207	12.6	266	1.53	1.79	N.A.	—		16.71	148	—		28
2,450	305	1.3	388	3.5	417	0.89	1.37	1.86**	(7.11)	319	8.51	193	6.80	222	22
1,850	390	0.1	440	0.5	437	0.05**	(5.90)	0.02	37.97	7	(34.55)	391	(6.86)	362	44
2,461	301	10.6	54	22.2	57	3.28	3.10	0.58	18.92	91	(13.68)	293	17.07	78	34
3,535	180	9.0	78	18.2	132	3.58	3.53	0.37**	25.48	41	16.30	150	23.92	31	36
3,880	152	5.3	197	15.4	204	3.20	3.14	N.A.	—		2.19	226	—		30
2,700	262	—		—		(0.74)	1.98	1.27**	—		—		—		40
1,575	424	9.1	75	22.3	55	1.46	0.96	0.03	47.46	4	(22.72)	338	37.58	5	45
1,820	394	13.2	25	19.8	93	1.89	1.51	N.A.	—		23.04	125	—		28
2,500	295	4.3	247	15.6	200	1.78	1.39	N.A.	—		(10.08)	315	—		38
2,533	286	11.3	47	19.1	111	3.52	3.13	0.67	18.04	104	10.49	179	17.92	68	45

1,591,529

‡Reflects an extraordinary charge of at least 10%, see the explanations of "net income" and "earnings per share" on page 200

†Includes sales from discontinued operations of at least 10%, see explanation of "sales" on page 200.

NOTES TO THE FORTUNE DIRECTORY

SALES include service and rental revenues but exclude dividends, interest, and other non-operating revenues. All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales of subsidiaries are included when they are consolidated; sales from discontinued operations are included when these figures are published. When the sales are at least 10% higher for this reason, there is a symbol(¶) next to the sales figure. All figures are for the year ending December 31, 1981, unless otherwise noted. Sales figures do not include excise taxes collected by the manufacturer, and so the figures for some corporations—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the corporations themselves. When they are at least 5% lower for this reason, there is an asterisk (*) next to the sales figures.

ASSETS are those shown at the company's year-end.

NET INCOME is shown after taxes and after extraordinary credits or charges when any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded when its redemption is either mandatory or outside the control of the company, except in the case of cooperatives.

EMPLOYEES: The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE: For all companies the figures shown are the "primary" earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common-stock equivalents outstanding during the year. "Common-stock equivalents" generally include (a) convertible securities whose cash yield is less than two-thirds of the prime rate at the time the securities were issued and (b) options and warrants when the effect of their inclusion in the computation would reduce the "primary" earnings per share. Per-share earnings for 1980 and 1981 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1971. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Results are listed as not available (N.A.) where the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1971. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1971 or 1981.

TOTAL RETURN TO INVESTORS includes both price appreciation and dividend yield, i.e., to an investor in the company's stock. The figures shown assume sales at the end of 1981 of stock owned at the end of 1971 or 1980. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spin-offs were reinvested at the end of the year in which they were received. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) where shares are not publicly traded or traded on only a limited basis. Where companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total-return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. Where corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

INDUSTRY CODE numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. They are the same industry groups as those shown in the tables beginning on this page. The median figures in the tables refer only to results of companies among the 500; no attempt has been made to calculate medians in groups with fewer than four companies.

CODE NO.	INDUSTRY
10	Mining, crude-oil production
20	Food
21	Tobacco
22	Textiles, vinyl flooring
23	Apparel
25	Furniture
26	Paper, fiber, and wood products
27	Publishing, printing
28	Chemicals
29	Petroleum refining
30	Rubber, plastic products
31	Leather
32	Glass, concrete, abrasives, gypsum
33	Metal manufacturing
34	Metal products
36	Electronics, appliances
37	Shipbuilding, railroad and transportation equipment
38	Measuring, scientific, photographic equipment
40	Motor vehicles
41	Aerospace
42	Pharmaceuticals
43	Soaps, cosmetics
44	Office equipment (includes computers)
45	Industrial and farm equipment
46	Jewelry, silverware
47	Musical instruments, toys, sporting goods
49	Beverages

WHO DID BEST (AND WORST) AMONG THE SECOND 500

TOTAL RETURN TO INVESTORS, 1981

THE TEN HIGHEST

	SALES RANK	
Unifi	794	227.33%
International Banknote	743	170.00
AFG Industries	899	166.67
General Steel Industries	962	155.98
Soundesign	882	137.84
Cubic	742	119.11
Compo Industries	966	112.46
Joslyn Mfg. & Supply	915	104.83
Puritan Fashions	701	104.56
Philips Industries	740	104.11

THE FIVE LOWEST

Combustion Equipment	984	−70.88%
Tomlinson Oil	970	−67.87
Beker Industries	727	−65.08%
Compugraphic	659	−62.92
Refinemet International	618	−60.76

THE INDUSTRY MEDIANS

Apparel	16.28%
Furniture	29.01
Tobacco	27.82
Textiles, vinyl flooring	20.26
Rubber, plastic products	16.91
Beverages	16.58
Shipbuilding, railroad and transportation equipment	14.79
Electronics, appliances	14.05
Jewelry, sivlerware	10.98
Motor vehicles	7.18
Metal manufacturing	6.90
Publishing, printing	6.12
Chemicals	4.22
Paper, fiber, and wood products	.74
Food	−1.13
Metal products	−1.58
Leather	−1.87
Glass, concrete, abrasives, gypsum	−3.84
Soaps, cosmetics	−6.78
Measuring, scientific, photographic equipment	−15.54
Industrial and farm equipment	−15.95
Musical instruments, toys, sporting goods	−16.39
Office equipment (includes computers)	−22.16
Mining, crude-oil production	−23.47
Aerospace	−28.87
Petroleum refining	−37.52
Pharmaceuticals	N.A.
All industries	**1.40**

TOTAL RETURN TO INVESTORS, 1971-81

THE TEN HIGHEST

	SALES RANK	
First Mississippi	578	46.27%
Pall	863	39.01
Scientific-Atlanta	660	38.59
Southland Royalty	542	38.34
Trico Industries	997	37.58
Loral	767	35.04
Keystone International	914	34.61
Petro-Lewis	831	33.29
Crystal Oil	620	32.48
American Welding & Mfg.	936	31.24

THE FIVE LOWEST

Instrument Systems	911	−26.48%
Combustion Equipment	984	−21.22
Fedders	887	−19.29
Marcade Group	654	−18.71
Texfi Industries	895	−18.65

THE INDUSTRY MEDIANS

Aerospace	22.54%
Mining, crude-oil production	17.45
Petroleum refining	16.58
Jewelry, silverware	15.24
Electronics, appliances	12.97
Publishing, printing	10.85
Industrial and farm equipment	10.38
Chemicals	10.03
Metal manufacturing	9.83
Metal products	9.67
Glass, concrete, abrasives, gypsum	9.63
Measuring, scientific, photographic equipment	9.51
Food	9.23
Beverages	9.11
Motor vehicles	8.15
Furniture	8.11
Leather	7.06
Paper, fiber, and wood products	6.94
Textiles, vinyl flooring	6.80
Rubber, plastic products	4.22
Apparel	2.58
Soaps, cosmetics	1.67
Musical instruments, toys, sporting goods	−2.07
Office equipment (includes computers)	−3.86
Shipbuilding, railroad and transportation equipment	−5.58
Pharmaceuticals	N.A.
Tobacco	N.A.
All industries	**9.11**

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Commodore	790	87.5%
Commerce Clearing House	623	47.5
Phoenix Steel	776	46.4
Curtiss-Wright	798	42.0
Mary Kay Cosmetics	723	39.0
Puritan Fashions	700	37.9
Farah Manufacturing	864	36.9
Safeguard Business Systems	988	36.5
MCO Holdings	892	36.3
Criton	873	34.9

THE INDUSTRY MEDIANS

	1981	1980
Tobacco	20.6%	N.A.%
Aerospace	20.3	N.A.
Jewelry, silverware	20.2	18.7
Beverages	18.4	15.2
Furniture	16.6	13.9
Soaps, cosmetics	16.5	16.7
Rubber, plastic products	15.9	7.6
Electronics, appliances	15.9	14.7
Publishing, printing	15.8	16.5
Chemicals	15.1	15.0
Industrial and farm equipment	14.0	14.5
Metal products	13.9	12.2
Mining, crude-oil production	13.6	15.0
Food	12.3	15.2
Office equipment (includes computers)	12.2	16.4
Apparel	12.1	7.8
Glass, concrete, abrasives, gypsum	11.7	13.5
Musical instruments, toys, sporting goods	10.8	16.8
Leather	9.9	N.A.
Motor vehicles	9.7	8.4
Paper, fiber, and wood products	9.2	16.0
Measuring, scientific, photographic equipment	7.6	12.4
Metal manufacturing	7.4	9.0
Shipbuilding, railroad and transportation equipment	6.1	5.3
Textiles, vinyl flooring	4.3	10.5
Petroleum refining	3.2	18.1
Pharmaceuticals	N.A.	13.9
All industries	**13.6**	**14.1**

RETURN ON SALES

THE TEN HIGHEST

	SALES RANK	
Curtiss-Wright	798	43.8%
Mesa Petroleum	562	31.4
Bacardi	965	27.5
Pogo Producing	639	22.9
Petro-Lewis	831	18.8
Tampax	734	18.1
Sabine	875	17.4
Lufkin Industries	566	17.2
Pacific Lumber	631	16.7
General American Oil	619	16.5

THE INDUSTRY MEDIANS

	1981	1980
Mining, crude-oil production	11.8%	13.6%
Aerospace	9.4	N.A.
Soaps, cosmetics	7.1	6.4
Jewelry, silverware	6.6	5.4
Tobacco	6.4	N.A.
Office equipment (includes computers)	6.4	6.5
Furniture	5.6	5.6
Beverages	5.5	3.8
Electronics, appliances	5.4	5.9
Glass, concrete, abrasives, gypsum	5.2	5.9
Industrial and farm equipment	5.2	5.1
Chemicals	4.9	3.9
Publishing, printing	4.7	5.4
Metal products	4.3	4.5
Rubber, plastic products	4.2	2.0
Leather	3.7	N.A.
Measuring, scientific, photographic equipment	3.6	5.4
Apparel	3.1	1.9
Paper, fiber, and wood products	2.9	5.7
Motor vehicles	2.8	2.8
Musical instruments, toys, sporting goods	2.8	3.8
Shipbuilding, railroad and transportation equipment	2.4	1.8
Food	1.6	2.6
Textiles, vinyl flooring	1.4	2.5
Metal manufacturing	1.3	1.4
Petroleum refining	.4	3.2
Pharmaceuticals	N.A.	5.9
All industries	**4.3**	**4.5**

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Kearney-National	814	206.3%
Apple Computer	598	185.8
Pengo Industries	823	133.4
Tomlinson Oil	970	118.9
Acton	577	102.8
Tandem Computers	774	91.2
Tom Brown	944	87.9
Nortek	675	86.3
Marcade Group	654	86.3
Paradyne	958	78.4

THE TEN BIGGEST DECREASES

Curtiss-Wright	798	50.4%
Illini Beef Packers	855	43.9
Continental Steel	898	38.0
Toro	698	37.7
De Tomaso Industries	923	31.0
Lamson & Sessions	762	28.6
Joslyn Mfg. & Supply	915	27.2
Homestake Mining	721	22.0
Richmond Tank Car	813	21.1
Beker Industries	727	20.5

THE INDUSTRY MEDIANS

	INCREASES
Office equipment (includes computers)	22.8%
Jewelry, silverware	17.5
Mining, crude-oil production	17.3
Chemicals	14.2
Soaps, cosmetics	11.8
Food	11.7
Electronics, appliances	11.5
Petroleum refining	11.2
Leather	11.2
Industrial and farm equipment	11.0
Publishing, printing	10.9
Beverages	10.7
Apparel	10.6
Furniture	9.8
Paper, fiber, and wood products	9.6
Metal products	9.3
Tobacco	7.4
Textiles, vinyl flooring	7.4
Rubber, plastic products	6.9
Metal manufacturing	6.7
Aerospace	6.6
Musical instruments, toys, sporting goods	6.4
Motor vehicles	4.6
Glass, concrete, abrasives, gypsum	4.4
Measuring, scientific, photographic equipment	4.1
	DECREASES
Shipbuilding, railroad and transportation equipment	9.4%
Pharmaceuticals	N.A.

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
Kuhlman	950	9,767.6%
Sta-Rite Industries	352	3,429.0
Bundy	856	3,161.6
Management Assistance	601	2,326.5
Simmonds Precision Prod.	948	1,930.1
Wean United	706	1,259.5
Longview Fibre	551	750.5
Telex	833	715.6
Hesston	656	645.0
International Banknote	742	481.1

THE TEN BIGGEST DECREASES*

Eastmet	630	98.3%
Acton	577	97.3
Dentsply International	695	95.0
Pettibone	596	94.0
North American Coal	507	94.0
Graniteville	593	92.2
Sullair	827	89.3
Crystal Oil	620	87.3
Faberge	685	86.7
Hexcel	908	81.9

*Listings exclude money losers.

THE INDUSTRY MEDIANS

	INCREASES
Office equipment (includes computers)	75.8%
Rubber, plastic products	35.8
Tobacco	31.2
Apparel	31.1
Aerospace	30.0
Metal manufacturing	29.9
Chemicals	23.3
Electronics, appliances	18.1
Beverages	18.1
Industrial and farm equipment	16.7
Metal products	16.3
Food	15.6
Mining, crude-oil production	13.8
Furniture	13.5
Paper, fiber, and wood products	11.9
Jewelry, silverware	11.7
Soaps, cosmetics	11.0
Publishing, printing	10.0
Measuring, scientific, photographic equipment	8.3
Motor vehicles	3.6
	DECREASES
Petroleum refining	80.9%
Musical instruments, toys, sporting goods	31.7
Leather	27.4
Glass, concrete, abrasives, gypsum	13.1
Textiles, vinyl flooring	7.7
Shipbuilding, railroad and transportation equipment	.3
Pharmaceuticals	N.A.

SALES PER DOLLAR OF STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Phoenix Steel	776	$47.81
Dairylea Cooperative	522	36.71
Commodore	790	36.33
Macmillan Ring-Free Oil	757	18.87
Keystone Foods Corp.	526	18.32
Smithfield Foods	759	17.76
Illini Beef Packers	855	14.70
Refinemet International	618	14.38
Cagle's	797	13.72
Dominion Textile (USA)	643	13.37

THE FIVE LOWEST

Sabine	875	$.89
Homestake Mining	721	.80
General American Oil	619	.75
Hanna Mining	647	.66
Mesa Petroleum	562	.62

THE INDUSTRY MEDIANS

Food	6.96
Petroleum refining	6.86
Tobacco	5.16
Apparel	4.28
Rubber, plastic products	4.09
Metal manufacturing	4.03
Shipbuilding, railroad and transportation equipment	4.00
Musical instruments, toys, sporting goods	3.99
Jewelry, silverware	3.40
Textiles, vinyl flooring	3.39
Leather	3.39
Furniture	3.25
Beverages	3.15
Aerospace	3.02
Publishing, printing	3.01
Motor vehicles	3.01
Chemicals	2.92
Metal products	2.77
Industrial and farm equipment	2.71
Electronics, appliances	2.69
Paper, fiber, and wood products	2.65
Glass, concrete, abrasives, gypsum	2.61
Measuring, scientific, photographic equipment	2.55
Soaps, cosmetics	2.42
Office equipment (includes computers)	1.90
Mining, crude-oil production	1.43
Pharmaceuticals	N.A.
All industries	**2.97**

SALES PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
Pogo Producing	639	$1,479,975
Holly	528	1,175,037
Tomlinson Oil	970	1,070,935
LeaRonal	728	873,899
Pauley Petroleum	800	861,942
Illini Beef Packers	855	858,820
Macmillan Ring-Free Oil	757	815,392
Southland Royalty	542	754,979
Wisconsin Dairies Cooperative	536	644,518
Howell	722	648,220

THE FIVE LOWEST

CTS	772	$30,702
William Carter	809	30,110
Bob Evans Farms	922	29,397
AVX	963	28,988
Farah Manufacturing	864	28,140

THE INDUSTRY MEDIANS

Petroleum refining	$731,806
Food	160,007
Mining, crude-oil production	124,157
Chemicals	117,449
Beverages	112,296
Tobacco	96,477
Metal manufacturing	95,367
Glass, concrete, abrasives, gypsum	89,063
Paper, fiber, and wood products	88,403
Soaps, cosmetics	88,027
Rubber, plastic products	82,751
Shipbuilding, railroad and transportation equipment	82,600
Musical instruments, toys, sporting goods	76,231
Industrial and farm equipment	75,784
Publishing, printing	71,237
Metal products	68,234
Motor vehicles	67,032
Jewelry, silverware	66,858
Aerospace	64,937
Electronics, appliances	59,256
Textiles, vinyl flooring	59,134
Office equipment (includes computers)	59,013
Measuring, scientific, photographic equipment	55,532
Furniture	54,092
Leather	42,280
Apparel	38,399
Pharmaceuticals	N.A.
All industries	**75,931**

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
Pogo Producing	639	$3,859,650
Mesa Petroleum	562	2,327,733
Southland Royalty	542	1,297,774
General American Oil	619	965,151
MCO Holdings	892	948,450
Inexco Oil	714	910,803
Forest Oil	946	885,113
Sabine	875	850,983
Adobe Oil & Gas	819	768,519
Energy Reserves Group	849	605,164

THE FIVE LOWEST

Goody Products	995	$17,593
Farah Manufacturing	864	17,349
William Carter	809	16,926
Oxford Industries	599	13,929
Bob Evans Farms	922	12,750

THE INDUSTRY MEDIANS

Petroleum refining	$431,908
Mining, crude-oil production	339,652
Chemicals	74,919
Glass, concrete, abrasives, gypsum	73,853
Food	72,059
Soaps, cosmetics	67,903
Beverages	63,705
Paper, fiber, and wood products	62,588
Tobacco	60,420
Metal manufacturing	59,827
Office equipment (includes computers)	59,094
Industrial and farm equipment	53,634
Aerosapce	51,862
Metal products	47,558
Motor vehicles	47,199
Publishing, printing	46,911
Musical instruments, toys, sporting goods	45,211
Jewelry, silverware	43,659
Rubber, plastic products	42,854
Measuring, scientific, photographic equipment	42,784
Shipbuilding, railroad and transportation equipment	42,582
Electronics, appliances	41,982
Furniture	31,434
Textiles, vinyl flooring	30,755
Leather	25,760
Apparel	22,250
Pharmaceuticals	N.A.
All industries	**50,983**

THE MONEY LOSERS

	SALES RANK	LOSS
Combustion Equipment Associates	984	$129,944,000*
Bird & Son	661	27,060,000*
Inspiration Consolidated Copper	871	24,162,000*
Publicker Industries	956	23,978,000
Energy Reserves Group	849	22,606,000
Questor	517	20,365,000*
General Refractories	533	18,951,000
Continental Steel	898	17,080,000*
Ideal Toy	937	15,452,000
Toro	698	13,068,000
Jonathan Logan	527	11,989,000
Instrument Systems	911	11,407,000*
De Tomaso Industries	923	10,619,000
Lamson & Sessions	762	8,995,000*
Recognition Equipment	979	8,167,000
TMC Industries	959	8,019,000*
Bibb	702	7,917,000
Compugraphic	659	6,662,000
Salant	691	6,508,000
APL	961	6,347,000
Munsingwear	980	6,251,000*
Pirelli Cable	894	6,033,000
Fedders	887	5,392,000*
Tomlinson Oil	970	5,387,000
Roblin Industries	941	5,359,000*
Clow	845	4,872,000*
Beker Industries	727	4,856,000
Talley Industries	556	4,304,000*
Sun Electric	826	4,278,000
Hayes-Albion	835	4,013,000*
Pauley Petroleum	800	3,737,000
Bulova Watch	850	3,677,000*
Halstead Industries	780	3,534,000
Iroquois Brands	921	3,385,000
Cadence Industries	974	3,061,000
AVX	963	2,833,000
Keystone Consolidated Industries	540	2,550,000*
Bobbie Brooks	754	2,398,000*
Midland Glass	840	2,134,000
Medalist Industries	919	1,951,000
Robintech	932	1,925,000*
GenRad	830	1,772,000
Salem Carpet Mills	782	1,616,000
Champion Home Builders	795	1,599,000*
Olympia Brewing	597	1,394,000
Cagle's	797	1,291,000*
Mirro	978	1,158,000
Crompton	905	885,000
Tasty Baking	821	471,000
Checker Motors	996	448,000
American Biltrite	837	441,000*

*Also lost money in 1980.

Reprints of this year's FORTUNE *Directory will be available in September. The directory will include the* FORTUNE *500 (from the May 3 issue), the Second 500 (from this issue), and the non-industrial "50 Largest" lists (to be published July 12). Single copies of the reprints are $7 each; 25 to 99 copies, $6 each; 100 or more, $5 each. Please address inquiries and payment to Fortune, Double 500 Directory 1982, P.O. Box 8001, Trenton, N.J. 08650. Payment must accompany order.*

ARRIVALS AND DEPARTURES

NEWCOMERS TO THE SECOND 500

	1981 SALES RANK
AFG Industries	899
Apple Computer	598
Bacardi	965
Barry Wright	926
Belo (A.H.)	822
Brown (Tom)	944
Clark (J.L.) Manufacturing	993
Coca-Cola Bottling Co. Consolidated	982
De Tomaso Industries	923
Dominion Textile (USA)	643
Forest Oil	946
Friona Industries	808
Galaxy Carpet Mills	929
General Automation	992
Goody Products	995
Graco	983
Great American Industries	930
Harland (John H.)	933
Instrumentation Laboratory	999
Intercraft Industries	985
Intermark	951
Intermedics	885
Lufkin Industries	566
MCO Holdings	892
Marcade Group	654
Molex	935
Mor-Flo Industries	975
Newpark Resources	648
Paradyne	958
Pengo Industries	823
Petro-Lewis	831
Pratt & Lambert	912
Questor	517
Ransburg	928
Recognition Equipment	979
Sabine	875
Safeguard Business Systems	988
Siemans-Allis	543
Sigma-Aldrich	998
Sparton	971
Standard Commercial Tobacco	521
Starrett (L.S.)	1,000
TRE	989
Tacoma Boatbuilding	866
Tandem Computers	774
Thomaston Mills	977
Tomlinson Oil	970
Trico Industries	997
Varco International	804
Webb	960

RETURNED TO THE SECOND 500*

	1981 SALES RANK
APL (1976: 898)	961
CMI (1979: 996)	869
Chase Bag (1974: 984)	942
Chatham Manufacturing (1973: 984)	991
Checker Motors (1979: 874)	996
Church & Dwight (1976: 993)	990
Dellwood Foods (1977: 995)	964
Farah Manufacturing (1976: 814)	864
Fleetwood Enterprises (1971: 551)	520
General Felt Industries (1977: 794)	644
General Refractories (1977: 509)	533
General Steel Industries (1972: 639)	962
International Controls (1972: 944)	949
International Flavors & Fragrances (1979: 501)	501
Kearney-National (1969: 959)	814
Keuffel & Esser (1970: 987)	987
Kuhlman (1979: 934)	950
Kysor Industrial (1979: 907)	976
MacAndrews & Forbes Group (1979: 983)	916
McDonough (1978: 523)	523
Reynolds & Reynolds (1977: 959)	768
Steiger Tractor (1976: 979)	918
Texas International (1979: 767)	817
Vulcan (1979: 891)	906
Winnebago Industries (1979: 730)	934

*Figures in parentheses indicate year and sales rank the last time the company was listed.

DEPARTURES FROM THE SECOND 500

	1980 SALES RANK
ARTRA Group	903
Allegheny Beverage[1]	946
American Greetings[2]	520
American Microsystems[3]	984
Ampco-Pittsburgh[2]	512
Arctic Enterprises	815
Armstrong Rubber[2]	535
Arvin Industries[2]	513
Barnes Group[2]	509
Brown-Forman Distillers[2]	518
Ceco[2]	508
Centronics Data Computer	988
Chickasha Cotton Oil	999
Copeland[4]	561
Cox Broadcasting[1]	601
DHJ Industries[5]	820
Deluxe Check Printers[2]	514
E-Systems[2]	501
Edgewater[6]	989
FSC[7]	885
Fansteel[8]	705
Filmways[1]	724
Fort Howard Paper[2]	538
Franklin Mint[9]	566
Gates Learjet[2]	576
Georgia Kraft[2]	559
Geosource[2]	503
Hasbro Industries	974
Houston Oil & Minerals[10]	541
Illinois Tool Works[2]	534
Intersil[11]	859
James River Corp. of Virginia[2]	558
Kerr Glass Manufacturing[2]	536
Kirsch[12]	844
Knudsen[2]	523
Lehigh Valley Industries	998
Ludlow[13]	702
M/A-Com[2]	611
Mallinckrodt[12]	502
Marion[2]	608
Marion Laboratories	955
Metro-Goldwyn-Mayer Film[1]	825
Multimedia[1]	868
Northwestern Steel & Wire[2]	516
OKC[14]	621
Oak Industries[2]	547
Palm Beach[2]	527
RKO General[1]	640
Rath Packing[2]	517
Reading Industries	1000
Reliance Universal[15]	804
Research-Cottrell[2]	552
Richardson[16]	884
Riegel Textile[2]	510
Ronson	936
Russell Stover Candies[4]	949
Russell, Burdsall & Ward[1]	892
Schaefer (F. & M.)[17]	822
Shaklee[2]	522
Sterndent[18]	749
Storer Broadcasting[1]	788
Taft Broadcasting[1]	727
Tappan[7]	656
Technicolor[1]	796
Terra Chemicals International[7]	638
Texas American Energy[1]	906
Titanium Metals Corp. of America[2]	507
Tonka	929
Tyson Foods[2]	546
Union Special	964
VSI[19]	545
Varlen	979
Western Gear[20]	672
Wometco Enterprises[1]	579
Xcor International	894

[1]No longer classified as an industrial.
[2]Moved up to the First 500.
[3]Acquired by Gould (500 rank: 179) Feb. 1982.
[4]Became a private company.
[5]Consolidated in Dominion Textile (USA) (rank: 821).
[6]Acquired by Hillman March 1982.
[7]Full results are no longer made public.
[8]Wholly owned by H.K. Porter (500 rank: 418).
[9]Acquired by Warner Communications (500 rank: 135) March 1981.
[10]Acquired by Tenneco (500 rank: 16) April 1981.
[11]Acquired by General Electric (500 rank: 11) Feb. 1981.
[12]Acquired by Cooper Industries (500 rank: 142) April 1981.
[13]Acquired by Tyco Laboratories (rank: 572) Sept. 1981.
[14]Liquidated May 1981.
[15]Acquired by Tyler (500 rank: 370) July 1981.
[16]Acquired by Witco Chemical (500 rank: 267) Feb. 1982.
[17]Acquired by Stroh Brewery May 1981.
[18]Acquired by Cooper Laboratories (rank: 719) Dec. 1981.
[19]Acquired by Fairchild Industries (500 rank: 262) Nov. 1980.
[20]Acquired by Bucyrus-Erie (500 rank: 475) Dec. 1981.

ALPHABETICAL INDEX OF THE SECOND 500 LARGEST INDUSTRIALS

COMPANY	RANK
AFG Industries	899
APL	961
AVX	963
Acme-Cleveland	541
Acton	577
Adobe Oil & Gas	819
Advanced Micro Devices	624
Aegis	867
Affiliated Publications	720
Alabama By-Products	725
Alaska Interstate	573
Albany International	557
Alberto-Culver	641
Allen Group	569
Allied Products	671
Alton Packaging	571
Amalgamated Sugar	591
Amdahl	508
Amerace	613
American Biltrite	837
American Business Products	771
American Crystal Sugar	553
American Maize-Products	524
American Shipbuilding	792
American Sterilizer	703
American Welding & Manufacturing	936
Ameron	634
Ametek	504
Analog Devices	889
Angelica	828
Anta	843
Anthony Industries	718
Apple Computer	598
Applied Power	865
Associated Coca-Cola Bottling	586
Athlone Industries	611
Augat	847
Automatic Switch	877
Avondale Mills	642
BIC Pen	760
Bacardi	965
Bairnco	676
Baldor Electric	880
Bandag	582
Banta (George)	836
Barber-Greene	744
Bard (C.R.)	602
Barry (R.G.)	939
Barry Wright	926
Bassett Furniture Industries	633
Bastian Industries	764
Beker Industries	727
Belo (A.H.)	822
Betz Laboratories	694
Beverage Management	874
Bibb	702
Binks Manufacturing	879
Bird & Son	661
Blair (John)	679
Bliss & Laughlin Industries	665
Block Drug	820
Blue Chip Stamps	729
Bob Evans Farms	922
Bobbie Brooks	754
Bohemia	838
Brown (Tom)	944
Brown & Sharpe Manufacturing	779
Brunswick Pulp & Paper	710
Brush Wellman	791
Bulova Watch	850
Bundy	856
Burndy	688
Butler Manufacturing	516
CCI	682
CHB Foods	649
CMI	869
CTS	772
Cadence Industries	974
Cagle's	797
California Portland Cement	773
Camco	841
Carlisle	537
Carter (William)	809
Carter-Wallace	716
Champion Home Builders	795
Chase Bag	742
Chatham Manufacturing	991
Checker Motors	996
Chelsea Industries	756
Chesapeake Corp. of Virginia	653
Church & Dwight	990
Clark (J.L.) Manufacturing	993
Cleveland-Cliffs Iron	564
Clow	845
Coachmen Industries	778
Coca-Cola Bottling Co. Consolidated	982
Coca-Cola Bottling Co. of Miami	888
Coleco Industries	834
Coleman	576
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Most of the figures in this FORTUNE Second 500 Directory were prepared by reporter Elizabeth S. Silverman, who is responsible for the columns reporting on companies' sales, assets, net income, stockholder's equity, and the industry code numbers. Figures on earnings per share and total return to investors were prepared by Claudine Knight.

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